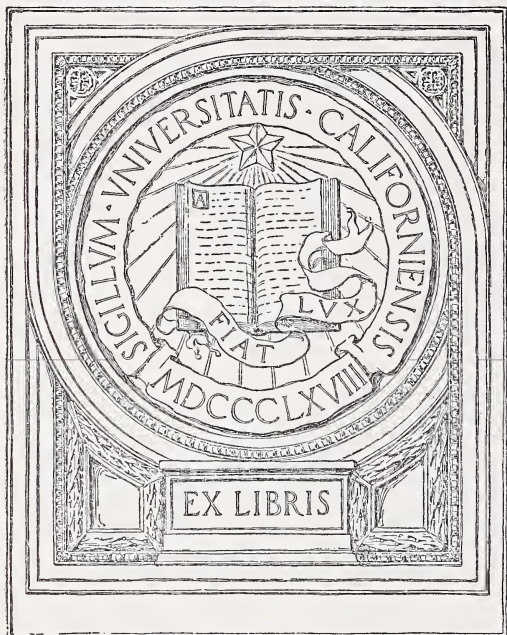
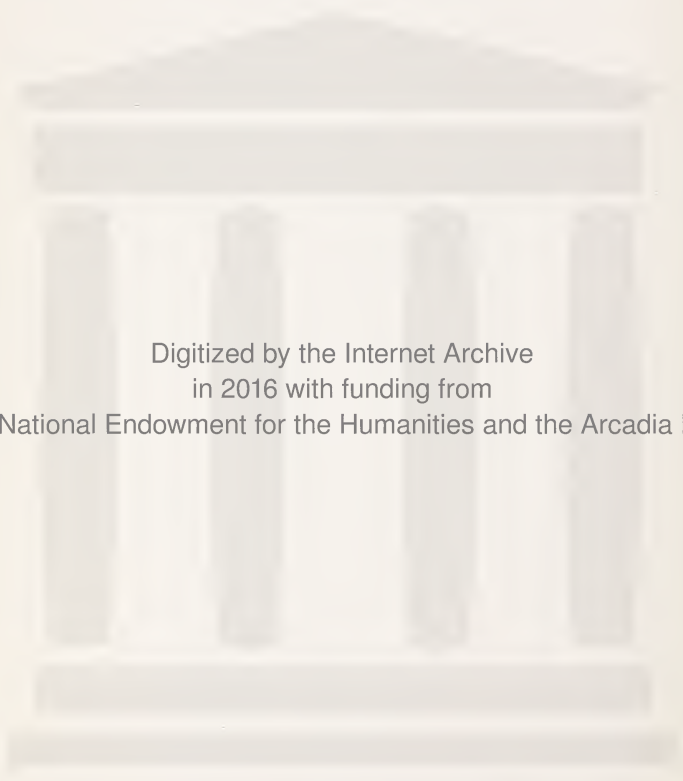


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Original Articles.

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. A complimentary edition of one hundred reprints of his article will be furnished each contributor should he so desire. Covers for same, or any number of reprints, may be had at reasonable rates if a **WRITTEN** order for the same accompany the paper.)

Mechanical Treatment of Fracture of Patella.

By J. D. BLOOM, M. D., New Orleans.

Varied by the influence of a direct or indirect cause, the pathological conditions that attend patella fractures with possible separation are one and the same in variety, aggravated or not in an instance by the exaggerating effect of the trauma, or that flexion and muscular tetany provoke.

The infrequency with which patella fractures are brought to the observation of the general practitioner, in the light of varied complications that occasionally attend, makes a review of facts an inviting theme for discussion. Neglected and delayed attention forces many cases for a curative measure to the operative procedure. Therefore, the method I have practiced, a procedure at once practical and of demonstrable utility, is worthy of a more general consideration.

The complicated character of the knee-joint which, in truth, is a

compound diarthrodial joint, makes absolute the need of a capsular protection to insure the requirements of strength in the line of repressed action, and to withstand the tax of diverted weight and muscular action. Significant in the matter of patella injuries is the tendon of the extensor muscle, contributing to capsular strength with the patella ligaments. Properly considered, the patella is to be regarded as a sesamoid bone developed in the tendon of the quadriceps, and the ligaments of the patella which are continued from the lower part of the patella to the tuberosity of the tibia, as the proper tendon of insertion of the muscle. The lateral portions of the tendon of the extensor muscle pass down on either side of the patella, attached to the borders of the tibia and then inserted in the upper extremity of the tibia on each side of the tuberosity. Externally these portions merge into the capsular ligaments, having been called the lateral patella ligaments.

The fascia lata becomes strong about the knee by fibrous expansion from the biceps externally, the sartorius internally, the quadriceps extensor in front, and the continuation of the tensor vaginae femoris tendon as the iliotibial band inserted into the external tibial tuberosity. The fascia is attached to the tuberosities of the tibia and fibula, and is strengthened upon each side of the patella by transverse fibres given off from the lower part of the vasti muscles, the outer as mentioned being the strongest, the internal vastus covering the joint capsule to a greater extent than that of the muscle upon the outer side.

The capsular ligament proper is exceedingly thin, but strong, filling in the intervals between the other ligaments. The strength of these ligaments vary in different individuals. The structures of the knee-joint are appreciated when the types of fractures that occur are considered. The intra-tendon variety which occurs without apparent injury to the tendon or fascia is of infrequent occurrence. Fracture with injury to the tendon with separation is of comparative frequency; fracture with tendon and capsular injury, with separation and without fascial injury is, too, a very frequent condition. Fractures involving the subcutaneous tissues of the joint contributory to extensor effort and control, and that involve the separation of patella bone, tendon fascia and capsule, to the effect of complete loss of extensor power, are the most serious of simple

fractures that are met with. The multiple fragment character of a fracture is of mention in possibility.

Practically considered, we have four types of fractures with which, of course, the compound character may be associated. The protection secured to the front of the knee-joint by the tendon offshoots and fascial strength, play an important part in fractures of the patella according as they are more or less torn. In the instance of direct violence which, indeed, is the more infrequent, the fragments are held together, except when the capsular ligaments are much lacerated. Supplemented as is frequently the case by muscular contraction, effusion or hemorrhage, the unapposed and stimulated quadriceps muscle drags the upper fragment upward until a separation from the lower of several fingers' breadth is marked; the lower fragment is much less active. The unyielding character of the ligament patella secures the lower fragment in place.

For the practical purpose of remedy we have a fracture of the extent outlined, and our measure of success in its treatment depends upon the appreciation of the existing mechanical impairment. The cross breaking strain of muscular action with the transverse and slightly oblique fractural effect in the injury, the multiple character of the break, with the combined effect of direct force and stellate, comminuted or longitudinal result caused alone by the effectiveness of the force, are purely incidental to the practical detail of remedy. The prognosis depends upon the amount of separation and extent of tear in the capsular tissue, and above all, the treatment. The more complete the fascial and capsular tear, the greater the bony separation, and the more likely a pseudarthrosis is to follow with its hindrance to locomotion.

The interposition of the fringe effect of the injury, is the aponeurosis between the fragments, preventing the apposition and adhering results that interfere so materially with the bony or ligamentous union. The unapposing effect caused by the trauma, the tetany of muscles, the aggravation and widening of the capsular gap, are enhanced or rather are indicated by a lack of bony contact. In this condition operative procedure can alone overcome the crippling effect of the injury. Patella contact insures union that is possible of a bony nature, though, the greater the interspace of union that results by fibrous bands between the patella, or the faulty capsular

union and its influence upon the fragments, so much the greater is the interference with the function of the leg.

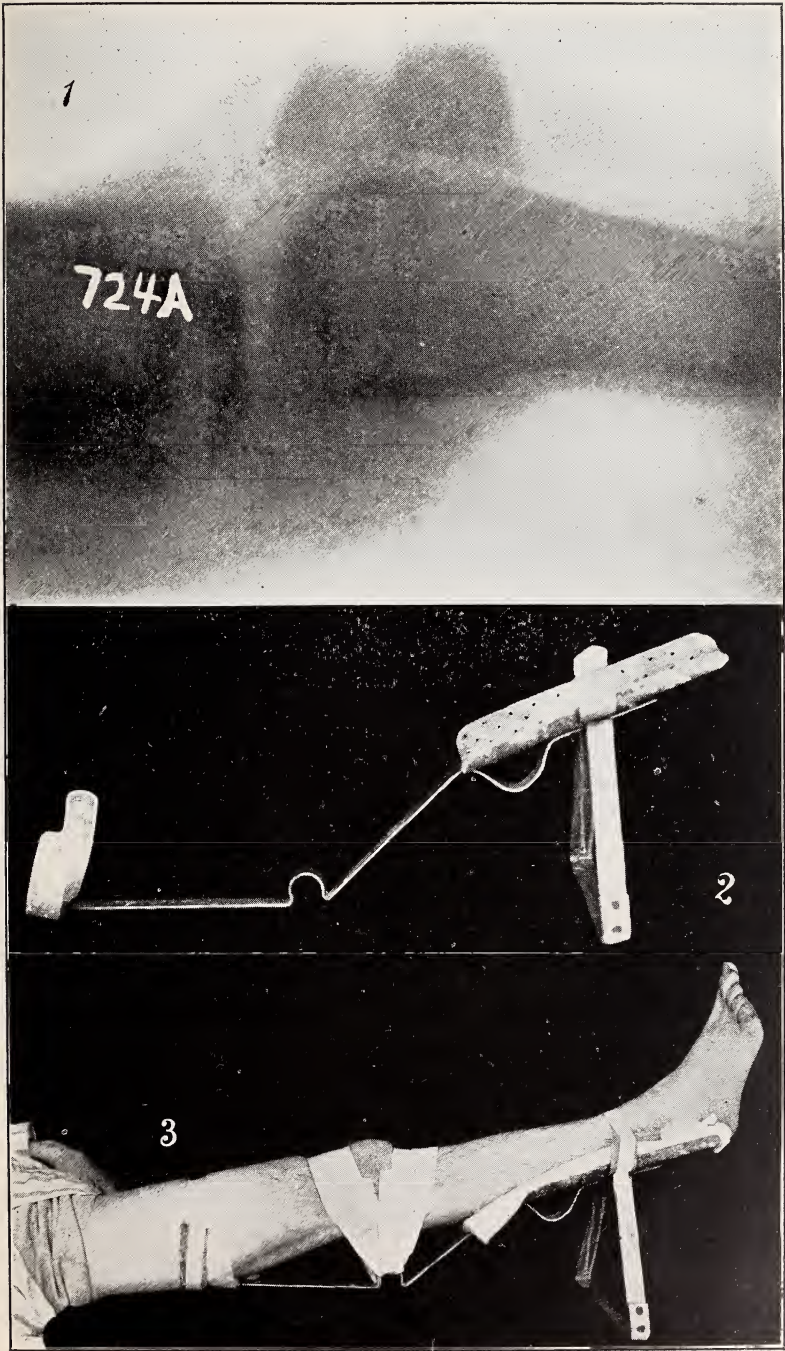
The atrophy of the quadriceps and its quieting effect upon the upper fragment, that admits of its adhesion to the anterior surface of the femur, is associated with a suspension of function and loss of muscular strength which, in truth, produce the apparent contraction in great part, and provoke the dependence of joint function upon a simple fascial extensor. The atrophy, therefore, is an effect of the injury and can scarcely be considered alone the cause of the pseudarthrosis.

Anatomically considered, proportioned to patella contact is the prognosis determined as to the possibility of direct or capsular union.

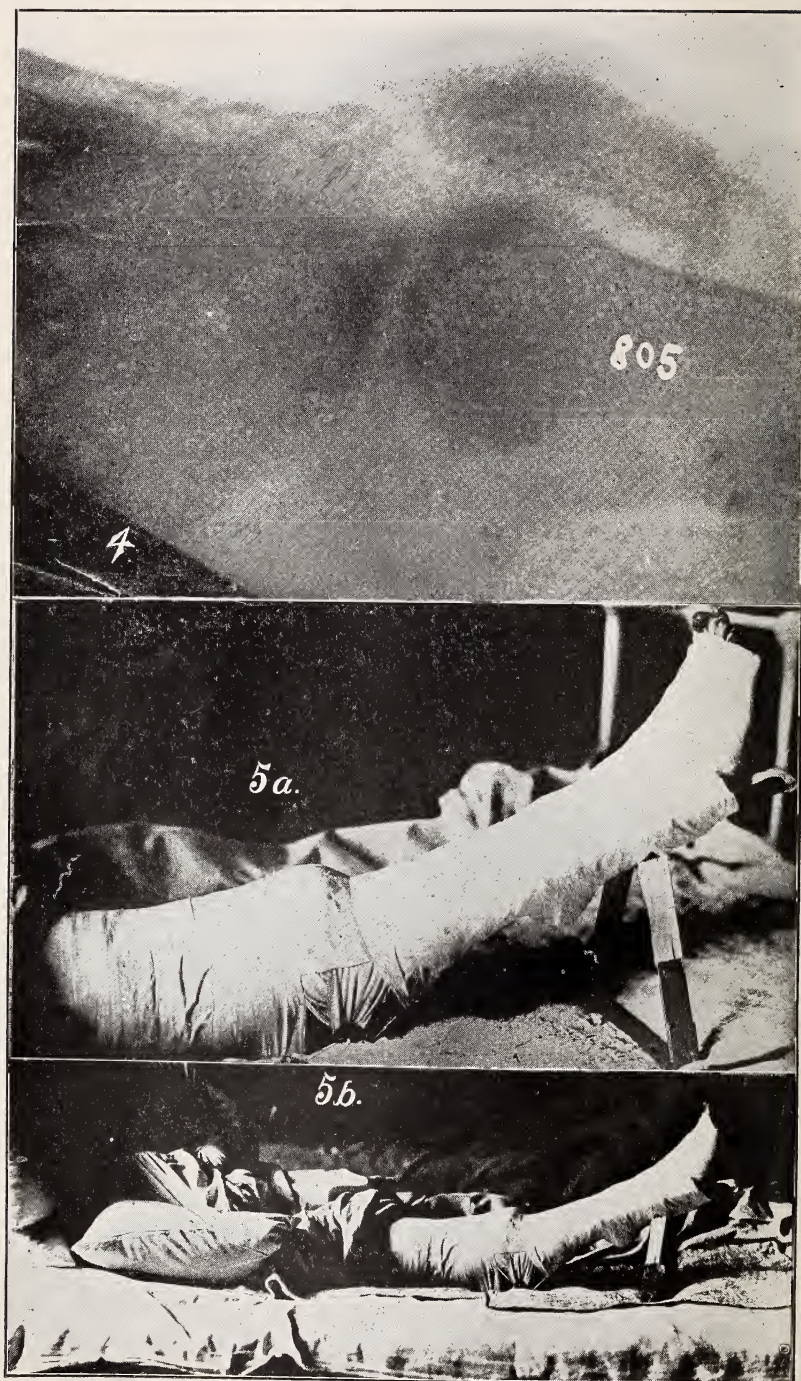
Of the several methods that are recommended in the treatment of this condition, not to mention those that are devoid of any active surgical interference, the method of immobilization speaks for its inherent good.

A method that has proved successful in my hand, and that is strengthened in its purpose for good by skiagraphic and photographic showings that I present for your inspection, is the method that is based upon a hyper-extension of the limb, and a co-aptation of the fragments. It is a method that has been tried in recent cases, and the success that has attended warrants my bringing the matter to your attention. The splint that I have devised for this purpose is in a measure crude, and could, by a little careful attention to its detail, be made more satisfactory. In the application of the splint it is preferable by far that an anesthetic be used. This will allow a through abrasion of the fragments to relieve it of the fringe inversion of the tendon which usually follows the patella fracture; at the same time offsets the muscular tetany and allows the relaxation of the joint elements to permit a secure approximation.

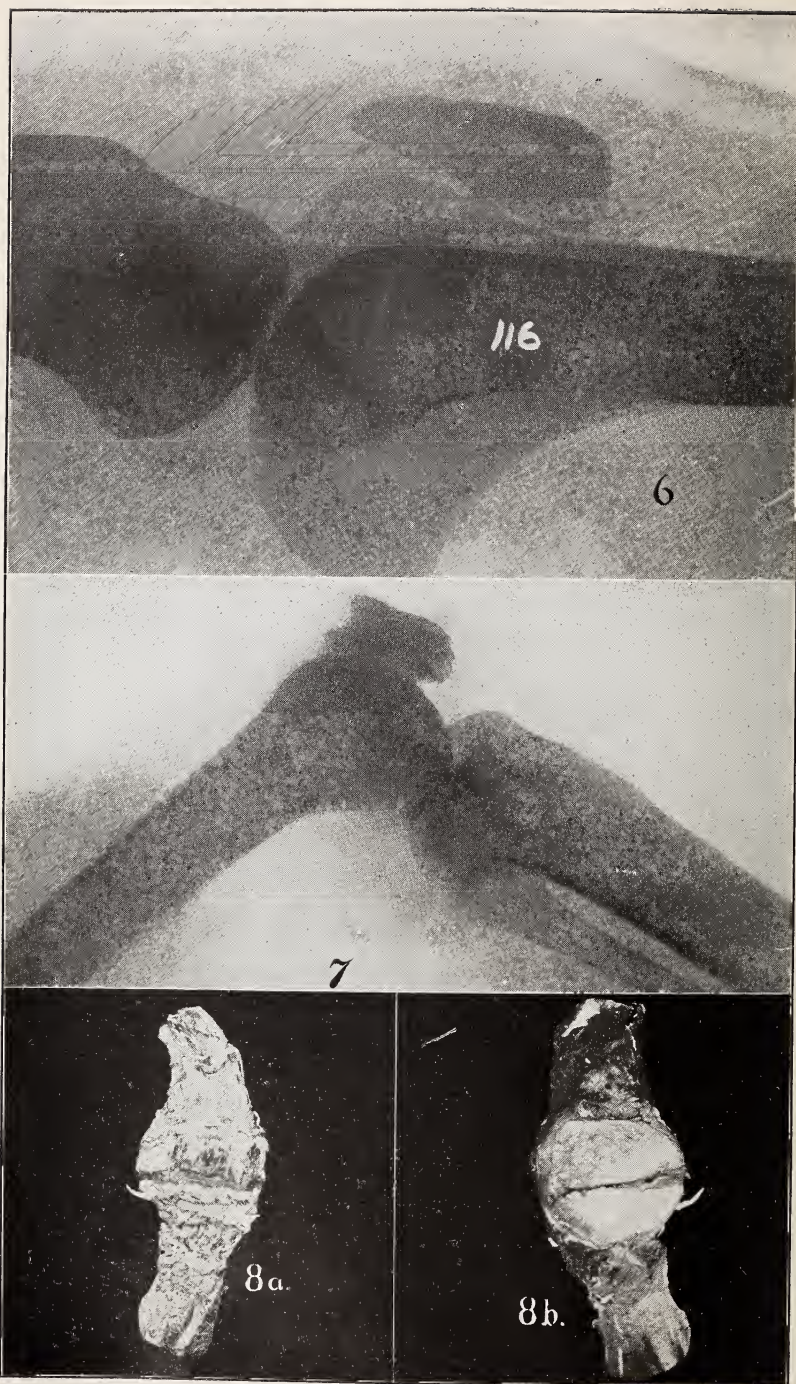
In skiagraph No. 1 is emphasized the effect of one of the cardinal principles of this method, and was taken at a time that I relied only upon the hyper-extension. One can plainly see the wisdom of abrasion of the fragments and the benefit of the imbricated plaster strips when compared with skiagraphs that follow; the approximation in this shows bony union.



PICTURES 1, 2 and 3.



PICTURES 4, 5a and 5b.



PICTURES 6, 7, 8a and 8b.

The splint used for this purpose is of a V-shape with inversion at its angle-shaped site, its upper flange attached to a collar for encircling the upper thigh, the lower flange resting on a triangular base for support and to accentuate the extension. A receptacle for the calf and heel is placed upon this.

Abrasion for detachment of any possible fringe adhesion to the fragments is first done. Hyper-extension by plaster strips is made in the application of the splint, and this is further reinforced by bandages on either side of the joint to strengthen and confirm its position.

The co-acting effect of imbricated strips $\frac{1}{4}$ of an inch in width secures more firmly the apposition and adds a fixity that contributes an immobilizing influence to the fractured bone. The result as shown in the skiagraphs that I present is of a number that I have recently had an opportunity to demonstrate by skiagraphic view, the permanency and security of the repair.

While I have to my credit quite a number of operative cases that have all done excellently well, the fragments of one that died from other causes four weeks after, I here present to show the bony output. (Picture No. 8.) (Specimen.) The known fact of the susceptibility of the knee-joint to infection, the method of suturing the bony fragments that may be employed, the possible traumatism, contrasted with the immunity enjoyed in the splint application and the excellent results as have been shown to me, encourage a more frequent use of this method of procedure. The splint as applied requires, of course, careful watchfulness to the calf and heel. It is well to remove the leg bandage at least once a week to observe for any pressure-necrosis that might occur from insufficient padding or sharpened pressure; as well does the re-application of the bandage both to the thigh and leg insure a more perfect result in the union. After a number of years in the use of the splint, I feel disposed at this time to advocate this measure of procedure with more emphasis than an early experience warranted.

The skiagraphs that I present speak for the evolution of the method and the conditions that were met in conflict to a perfect result.

The osseous output, that, in cases I have operated upon, seemed more evident from the lower fragment than the upper, speaking

as it does for a greater blood supply to this fragment. This forms a cementing influence in the fixation that is secured through plaster strips.

It is noticable by the skiagraphic views, and a matter to which attention is called, of the perfect bony union that is the result of this method, and that is secured in no other way than by a bony suture; which means a close apposition of fragments immovably held together. Supra or peri aponeurotic, or tendon suture does not secure a bony union in fractures with separation. X-Ray examinations will interpret this.

Stern, in his article entitled "Led Astray," appropriately, I think, censures the modern disposition toward the effort for specific treatment for each and every ailment that flesh is heir to, and the dependence of men in the practice of today on such issues.

Among other things he says: "Let us preserve our individuality! Observe for yourselves, think it out for yourselves, give your sympathies to your patient and give him your help and don't wait for a specific curative serum. Drop that which medical autocrats have presented to you as 'Science,'; it is an encumbrance on your energy as true physicians, it makes you uncertain in your therapeutic activity, it destroys your belief in the efficacy of your symptomatic procedures without bringing you nearer to the goal of rational medication."

This very pertinently expresses the field of modern medicine or rather, I may say, the disposition of medicine of today.

The method is one that gives a stamp of individuality to the attendant, and is worthy of consideration as to its defects and practical utility.

Studies of Yellow Fever.

[Extracts from Fourth Memoir by E. E. Marchaux and P. L. Simond, the French Commission at Rio Janeiro.]

Translated by J. BIRNEY GUTHRIE, M. D., New Orleans.

GENERAL CONCLUSIONS—I. TRANSMISSION OF YELLOW FEVER.—Various epidemiologists, and among them Finlay in particular, have long asserted that one mosquito, the *stegomyia fasciata*, is the agent of transmission of yellow fever. The exactness of this asser-

ton was demonstrated first in Cuba by Reed, Carroll and Agramonte, and is amply confirmed by our own experiments on human subjects.

The *stegomyia fasciata* is capable of inoculating yellow fever by its bite, after it has itself been previously infected. It becomes itself infected in biting the sick during the first, second and third days of the disease.

Under most favorable conditions of temperature, an interval of at least twelve days is necessary after becoming infected before it can acquire the power of infecting.

The bite of a *stegomyia fasciata* infected after that lapse of time is not dangerous every time. Our observations lead us to admit that, in all cases, certain special conditions of temperature are necessary in order that the bite be followed by an infection.

Under certain conditions the infection can be transmitted by the female *stegomyia fasciata* to her descendants by heredity. The experiment which gave us a positive result in this direction was with mosquitoes, the issue of the first generation from the infected parent. Judging from this experience, this hereditary transmission does not extend farther than the first generation.

The study of the circumstances under which our experimental case occurred, makes us think that the hereditary transmission can only take place with eggs deposited more than twelve days after the first ingestion of virulent blood. On the other hand the mosquito which was the issue from these eggs possessed power of infecting only after the fourteenth day of its existence in the adult form.

The experiments having for their object the infecting of mosquitoes on human subjects during the period of incubation of the disease were all negative. In one case, the mosquitoes had bitten the individual three days, and in another case, six hours before the appearance of the first symptoms. These mosquitoes remained absolutely innocuous during their entire life. One should conclude, in consequence, that the *stegomyia fasciata* does not contract the infection in biting a human subject in the incubation period of yellow fever.

This fact is of particular significance in the prophylaxis of yellow fever.

Experimental transmission has been obtained in the greater num-

ber of cases by causing the mosquito to bite the man at some time during the day. One might then suppose that the transmission occurs in the natural state at all hours of day or night. This is, however, not the case. Our numerous experiments and our observations on this subject go to show that natural transmission takes place at night, between the onset of twilight and daybreak.

We have determined experimentally that at the period of its life where it possesses the power of infecting, the *stegomyia fasciata* at liberty does not seek to bite man between 7 a. m. and 5:30 p. m. The transmission is, then, nocturnal.

In consequence, in a place infected with yellow fever, the inhabitants can, during the day, attend with impunity to their affairs. It is with the disappearance of twilight that they must protect themselves against infectious mosquitoes.

The *stegomyia fasciata* is the mosquito most widely spread in its distribution in a yellow fever infected place, and truly has it been accused of being the special agent of transmission. We have carried on investigations as to whether other species could share with the *stegomyia* the power of transmitting yellow fever, and have found in our experiments that *culex fatigans*, *culex confirmatus* and *culex tæniorhyncus* are incapable of transmitting the virus.

These experiments are in accord with the observation that yellow fever only appears in localities where the *stegomyia fasciata* is present. Cases brought into a locality where this mosquito does not exist never give rise to secondary cases, no matter what other varieties of mosquito abound in the neighborhood of the sick.

It is probable that the organism of the *stegomyia fasciata* is the only one among all existing species of mosquito which furnish a favorable culture medium for the virus of yellow fever.

The fitness of the organism of this mosquito as a culture medium does not itself suffice to permit transmission. It is necessary that the duration of the life of the insect in a perfect state be sufficiently long, in order that the minimal twelve days shall elapse between the inoculation of mosquito and the biting of the non-immune healthy individual.

These conditions are not attained among the majority of the species *culicidæ*. The females deposit eggs usually during the eight days following the first bite and die shortly after the deposition of

eggs (*pontes*). The female *stegomyia* on the contrary is capable of surviving the first deposition of eggs, and can deposit again and again. They can, according to our observations, deposit eggs as often as seven times successively. In the interval between the different *pontes*, she draws blood from man several times. The average duration of her existence in the adult stage is from twenty to thirty days. She is then, twelve days after having bitten a patient sick with yellow fever, capable of transmitting the disease to a great number of individuals.

The faculty possessed by the female *stegomyia fasciata* of depositing several sets of eggs is that which makes it possible for her to act as the carrier of yellow fever. If this mosquito obeyed the law common to the *culicidæ*, according to which the female dies after the first oviposition, yellow fever would be unknown to man.

The ingestion of living blood is indispensable to the female in order that she may develop her eggs. This explains the imperative desire of the female to torment man by her bites.

The idea of mosquito transmission does not seem, on first thought, incompatible with the older hypotheses regarding contagion by contact with the sick, their effects or their excretions. Our experiments, as well as those of the American Commission, prove, however, that such contacts are absolutely free from danger.

Neither sleeping in the bed with the patient, nor the handling of this patient or his effects or his excretions, or even the virulent blood drawn from his veins, nor the handling of the cadaver or organs showing characteristic lesions, are capable of producing a contagion.

One might say that if direct contact with the bedding, etc., or the excretions, cannot transmit the disease to man, perhaps the *stegomyia fasciata* could become infected by such contact. This hypothesis is disproved by experiment. In short, *stegomyia fasciata* fed on black vomit, or melenic stools, or with blood coming from hemorrhages or with the sweat of patients, remain incapable of transmitting yellow fever.

The following experiments show that the *stegomyia fasciata* cannot naturally infect herself otherwise than by sucking virulent blood while biting a human being sick with yellow fever.

1° Healthy adult *stegomyia fasciata* kept in a jar which had

contained infected mosquitoes, or kept for a long time in contact with these, never acquired infection.

2° Healthy adult *stegomyia fasciata*, kept in jars in contact with fresh cadavers of infected mosquitoes, never acquired infection.

3° Larvæ of *stegomyia fasciata* issued from healthy parents, reared in water where we had placed numerous fresh cadavers of infected *stegomyia fasciata*, gave origin to perfectly healthy adults, which never showed infection at any period of their existence.

Based on experiments which confirm entirely the epidemiological observation, we are in a position to affirm that, in nature, the transmission of yellow fever occurs only through the intermediary of the *stegomyia fasciata*, and that this insect can only become infected by biting the patient.

If there exist, in a focus of yellow fever, infected *stegomyia fasciata* which have never ingested virulent blood, it can only be in the case where the infection has been hereditarily transmitted to them through a mother which has bitten a human subject sick with the disease.

The perpetuation of yellow fever seems to be from this on to be bound to a single cause, exactly defined, the bite of the infected *stegomyia fasciata*. Its mechanism is very simple: the ingestion by the mosquito of blood drawn from a human subject sick with yellow fever, and the inoculation of the healthy individual by the mosquito with virus which has been cultivated in the organism of the latter.

II. VIRUS OF YELLOW FEVER.—Yellow fever is due to a living virus, which introduced into the tissues of the human body, there develops and multiplies.

The existence of this virus in a case of yellow fever is proved by the inoculation of a healthy non-immune, either with blood or fresh serum. If the blood has been drawn during the first, second or third day of the disease, this inoculation will always produce the disease.

All of our experiments go to show that the virus does not exist in the blood of the patient on the fourth day of the illness.

To get a positive effect, it is necessary to make the inoculation of blood or serum into the tissues. Applied to the abraded skin the virulent serum remains without effect.

The organism of yellow fever is of extreme smallness. In undiluted serum it passes through a Chamberland F., but not a Chamberland B. filter.

The experiments of the Second Commission of the Yellow Fever Institute (U. S. P. H. and M. H.) show that, after the addition to the serum of an equal volume of water, it can even pass through the Chamberland B. filter.

It is without doubt owing to its size that it has remained invisible up to the present time. This organism is exceedingly delicate. It is destroyed by heating for five minutes at 55°C. The serum containing it preserved, in contact with the air lost its virulence in forty-eight hours between 24°C. and 30°C. In defibrinated blood, preserved at the same temperature, screened from the air by a layer of oil of vaselin, the virus remained still living after five days. In eight days it lost all its activity.

The virus of yellow fever cannot be cultivated in any known medium, nor by any known procedure. The only method of culture which gave us a result, consisted in making healthy *stegomyia* absorb the bodies of virulent *stegomyia* triturated in a fresh state. Still we have only been able to obtain this culture *in vivo* for a first passage.

One encounters in the *stegomyia fasciata* different visible parasites—*nosema stegomyia*, gregarines, yeasts. These parasites have no relationship to yellow fever.

III. IMMUNITY AND EPIDEMIOLOGY.—The incubation period is from four to six days. Some experimental cases and observations, however, prove that, occasionally, it can be longer and attain even thirteen days.

Previous inoculations of serum, heated during five minutes at 55°C., or of defibrinated blood kept eight days under oil of vaselin, confers a relative immunity against a subsequent virulent injection. Serum from a case of yellow fever on the eighth day of the disease already possesses preventive qualities.

The serum from convalescents possesses not only preventive qualities, but may have a certain curative power.

A first attack confers immunity. This immunity, in most cases complete, can, however, according to the individual characteristics, become attenuated after the lapse of a variable period of time and permit a second attack.

Second attacks are usually benign. They can be, nevertheless, at times as grave as an original attack.

No race can enjoy a natural immunity to yellow fever. The black race, contrary to a widespread opinion, is as susceptible to it as the white race. Differences in susceptibility, which are revealed in different individuals of the same race, or of different races, seem to be due to the different degrees of attraction, more or less marked, that the odor of the skin of each individual exercises on the *stegomyia fasciata*.

The human species is at all ages susceptible to yellow fever. At the same time the disease does not behave in the same manner among children as among adults.

Among young children it exists in a form so benign that it remains almost always undiagnosed, and if diagnosed at all, only late in the course of the disease, in the exceptional cases which present black vomit and death.

Contrary to an accredited opinion, children living in a place where yellow fever is endemic have generally had the disease at a very early period of their existence, in a "*forme fruste*," which is the rule among infants and the exception among adults.

Since natives of an endemic focus of yellow fever have all been immunized by an infantile attack, it follows that in adult life very few are affected during an outbreak. On the contrary, strangers of any age furnish the victims to the disease. These are the ones who feed the epidemics.

During the intervals where it does not rage as an epidemic, yellow fever is perpetuated by infantile frust cases, which succeed each other without appreciably increasing the mortality and without being diagnosed. Endemicity is thus established in a region where the *stegomyia fasciata* exists permanently in an active state, when yellow fever is once introduced.

In regions where climatic conditions do not permit the *stegomyia fasciata* to exist all the year, the introduction of persons infected with yellow fever, at a time when these mosquitoes are multiplying, determines the formation of an accidental focus. The epidemic, generally severe because it encounters a non-immune population, extinguishes itself completely when the *stegomyia fasciata* disappears. It reproduces itself at new periods favorable to the multi-

plication of this mosquito only if new human cases of yellow fever are again brought in.

If in a place where the *stegomyia fasciata* exists the year round yellow fever appears without being imported from without, and the native adults are spared, while the strangers suffer, one can be certain that this place is an endemic focus of long standing activity.

IV. PROPHYLAXIS.—The defense against yellow fever follows logically from the knowledge of its transmission. It is to be remembered:

1° That yellow fever can assume an infectious character only in regions where the *stegomyia fasciata* exists;

2° That in regions where this species is absent, it can be accidentally brought in by persons or by ships;

3° That this mosquito can live and multiply under other conditions of climate than its own; and that, thanks to its domestic habits, it can seek shelter, temporarily, against the adverse nocturnal conditions of temperature in the dwellings of man;

4° That on board ships, to which it has an easy access, it can multiply and exist during a long voyage, owing to defects in the construction of cabins and sleeping quarters.

Prophylaxis differs according as it is necessary to stamp out yellow fever in a place where it has been already introduced, or to protect a territory against its introduction.

So far as the mosquito is concerned we should carry out its extinction in all the region by means directed against the larvæ. This is all the more important if we remember that among these there may be some which are hereditarily infected. *Stegomyia* adults should be destroyed at the same time in all quarters where cases are found. Finally houses should be closed to the mosquito by appropriate methods, so that the inhabitants will be shielded from the bites of mosquitoes, especially at night.

So far as the patient is concerned, we should exercise vigilance, so that any case, doubtful or suspicious, shall be immediately known from the beginning. Every suspicious case as well as every positive case should be vigorously isolated—not from man, but from mosquitoes.

For the protection of a non-infected locality where the *stegomyia fasciata* exists it is necessary to direct measures against mosquitoes

on the one hand, and against new arrivals on the other, at all points in the locality, and at all times we should carry out systematically the destruction of the species, *stegomyia fasciata*. The disappearance or even the diminution of these mosquitoes is the only true safeguard against the appearance of an epidemic. Strangers arriving from a yellow fever infected point, whether or not put into quarantine, should be daily observed up to the thirteenth day after the date of departure from infected place. At the least febrile symptom occurring during this period, they should be immediately placed where they cannot be reached by the *stegomyia fasciata*.

Ships coming from an endemic focus of yellow fever should be the object of a severe inspection, to determine the presence of the *stegomyia fasciata* on board. If they are free from this mosquito, no danger can come from their communication with land, the debarkation of their passengers, or the discharge of their merchandise. If it is found that they carry *stegomyia fasciata* they should be held until holds, berths, cabins and other places have been disinfected with some asphyxiating gas, passengers being removed before this is done.

Each time a ship has had, in the course of a voyage, a suspicious case, the same thorough examination should be made for the *stegomyia fasciata* on board. If it is found absolutely free from these mosquitoes, there can be no danger from discharging the cargo. Only such passengers should be discharged as are absolutely well and those on condition of agreeing to medical supervision as indicated above.

Quarantine measures are no guarantee against yellow fever. They present, beside other defects, the very grave one of inspiring a sense of false security.

Society Proceedings.

Orleans Parish Medical Society.

President, DR. C. JEFF. MILLER. *Secretary*, DR. AMEDEE GRANGER.
141 Elk Place, New Orleans.

In Charge of the Publication Committee, DR. AMEDEE GRANGER, Chairman,
DRS. GEO. S. BEL and E. H. WALET.

MEETING OF MAY 26, 1906.

DR. C. W. ALLEN read a paper entitled:

Report of a Case of Multiple Urethral Stricture With Complications.

M., aet. 46, white male, locomotive engineer, was first seen by me April 10, 1906. Referred by Dr. Geo. S. Bel. Had gonorrhea about twenty years ago, for which he used some simple remedy recommended by a friend; did not consult a physician. Sometime following this he contracted phagedenic chancroids of the head of the penis, requiring amputation about one inch from the pubis. He also had a large hydrocele, this had been tapped several times, but at present was of large size. He complains that for two years past he has been having some difficulty in urination, progressively growing worse; for the past six months has been only able to dribble, passing from one to two ounces at a time, after much straining and suffering, and having to repeat the act from every half hour to one hour.

The urine was strongly ammoniacal, full of pus and mucus.

Instrumentation with other than filiforms was out of the question, as the strictures commenced at the meatus, and the enormous hydrocele displaced the canal in a tortuous curve to one side.

All radical operations being refused by the patient, both upon the hydrocele and urethra, the hydrocele was tapped and 10 oz. of fluid withdrawn. This helped the condition in the urethra very little, for it was only after three attempts on different days that a filiform was finally passed into the bladder.

The difficulties of instrumentation were markedly increased here by the absence of anything but the stump of a penis, and this of such a shape and consistency that you could not hold it.

After getting the filiform within the bladder I fixed it in place, and allowed it to remain for twenty-four hours, this softened and enlarged the strictured canal so that the stream of urine was better. After repeated failures to get any other instrument to pass into or dilate the canal, I reinserted the filiform for another twenty-four hours, but this did not seem to accomplish anything. Frequent attempts with the smallest Goulé sound obtainable, aided by cocain and adrenalin, and preceded by warm sitz baths, were futile without a dangerous amount of force. I then tried and succeeded in passing a Number 10 French electrode almost to the bladder, reaching this point after several successive seances, using a moderate galvanic current to aid in the dilating and softening process. This was followed by larger sounds, until now the canal will take a 15 French bougie. This case is particularly interesting to me, both from its severity, the long neglect by the patient of himself, and the difficulties encountered in treatment; and I would like to emphasize the benefit the small electrode was to me when all other instrumentation seemed impossible, and the patient refused operation. Any count of the number of strictures would be difficult, as the entire canal is a fibrous cord.

In all probability this patient will have to have his urethra dilated at regular intervals for the rest of his life.

DISCUSSION.

DR. GRANER asked Dr. Allen what had been the condition of the prostate gland in the case reported by him.

DR. SIMON—Thiosinamin, used hypodermatically, has occasionally given very good results in the treatment of scar strictures of the esophagus. I have the report of one case, in an adult, of four years standing, due to lye poisoning, which was entirely and permanently relieved by this treatment in about two months. Along these lines the thought suggests itself to me, that perhaps thiosinamin would be found of benefit in urethral strictures also, since they are made up of scar tissue. I understand, however, that Dr. Allen has tried the remedy in these cases without benefit.

DR. DELAUP had not found electrolysis satisfactory. Good results, when obtained, had been of a very temporary nature. Electricity caused some absorption of fibrinous matter at sitting, at the next sitting this advantage is lost, and often the stricture is tighter than ever. The doctor thought that, barring incision, gradual pressure was the only thing that would effect a cure in those cases.

DR. LAZARD had only seen good results from electrolysis in one case of stricture, near the bulbo-membranous junction. Dr. Allen's case, with strictures, beginning near the meatus and ending no one knows where, was a very rare condition. The doctor had made use of the Le Fort dilator, but could not say that it had been of any special benefit.

DR. GRANGER had, for the past three years, treated urethral stricture by electrolysis. His results had been very satisfactory, and he never wanted to employ a better treatment. In his experience, which it is true was limited and of comparatively recent date, the results obtained had been permanent. Dr. Granger believed that a great many of the unsuccessful users of electricity did not quite comprehend its indication and the mode of action in urethral stricture. They seem to think that the stricture should be dissolved or removed in part during each seance. This was possible, but not without causing sloughing and ulceration, which was certain to result in new scar tissue formation. It is true that with the use of the electrical current a larger electrode could be passed through the stricture than without its use, but this was due to the softening of the stricture by active hyperemia, to relaxation of spasm, and to the lubricating effect of the secretion caused by the electrical current, and not due to immediate dissolution or absorption. The real benefit from the electrical application, although beginning during the seance, continued for several days afterwards, and it was then that absorption took place. This was the result of the active hyperemia, the increasing flushing with blood, and the stimulation of the absorbents and end organs of the nerves.

DR. NELKEN thought that the mistake made in treating strictures of the urethra was that dilatation was not carried high enough. Cutting operations made no pretense of bringing about absorption of scar tissue, and a sufficiently high dilatation of the stricture cannot be obtained with sounds. For this purpose the urethral dilator

should be used, and its use persisted in until urethroscopic examination showed the absorption of all scar tissue. Cicatrices will probably be present even after a cure has taken place, but in cured cases they no longer project, and the normal folds of the urethra are restored.

When this occurs there is no tendency to recurrence, and we are justified in believing that the stricture has been cured. It is important to remember that dilatation should not be repeated too early. In dilatation of the urethra small tears occur in the strictured area, and too early a repetition of treatment will simply increase the tearing in this yet unhealed point.

DR. GESSNER—Has any one any proof to offer that scar tissue ever disappears? He had always been taught that scar tissue was there for life.

DR. ALLEN—Thiosinamin had been used in this case with negative results. He did not use the Le Fort instrument, but one which answered the same purpose. In the case reported the Le Fort dilator could not have been used, as there was no penis to catch hold of; the only hold that could be gotten was by pinching up the skin of the scrotum near the urethral opening, and with this hold, when any pressure was made with an instrument in the urethra, the entire corpora cavernosa and spongiosa would slip back through the scrotum under the pubes. He agreed with Dr. Nelken that the fibrous tissue in strictures does disappear. In regard to the use of electricity, he had had the same experience as Dr. Delaup, but added that he thought at times that it had made the strictures more resilient, but advised consulting an electro-therapeutist on this point.

DRS. V. MAES and SAM LOGAN read a paper entitled

Stovain in Spinal Anesthesia—Report of Twelve Cases of Its Use With a Comparison With Cocain.

In presenting this series of twelve cases of spinal anesthesia, induced by means of one of the newer analgesic drugs, as used by Professor Rudolph Matas in his clinic at the Charity Hospital during the past three months, it is not our purpose to discuss in any

way the relative advantages of spinal over general anesthesia, or the reverse.. The status of the former method is fast being determined, and its advantages and limitations are becoming more known and appreciated as our experience increases. We simply desire to call the attention of this society to the more satisfactory results which have been obtained by the use of stovain for this purpose than was the clinic's experience with cocain or eucain.

In comparison with these two older drugs, which have been largely used and discarded, save in special cases, by the surgical clinic of the Medical Department, we have noted the following signals advantages in favor of the employment of stovain, alone, or in combination with adrenalin (Braun), with cocain (Chaput), or with both cocain and adrenalin (Chaput).

1. *Sterilization*.—Stovain stands sterilization by boiling, without any impairment of its analgesic properties when subjected to any degree of heat below 115° C. (239° F.). Cocain is impaired by heat and by being kept.

2. *Toxicity*.—With a ratio of analgesic properties which we have found practically the same as cocain, stovain is three times less toxic in its action, and is therefore far safer for use.

3. *Production of Analgesia*.—In our experience cocain has usually had the disadvantage of not producing analgesia except after the expiration of some minutes; in some cases this interval has been as long as from twenty to thirty minutes after the intra-spinal injection. In our series of stovain cases, surgical anesthesia was present in the time taken to change the position of the patient from the posture in which the injection was given to the position most suitable for operative purposes. This interval averaged three minutes. The longest interval after the introduction of the solution was ten minutes (case 12).

4. *After Effects*.—The disagreeable after effects which we found invariably following the use of the cocain injections exceeding 1/5 gr. were considered sufficient reasons to justify its discontinuance. The excessive vomiting, nausea, depression, cephalalgia and pyrexia proved annoying, and at times alarming in their persistence and intensity. In one of the last cases in which it was used most alarming symptoms of basilar and spinal meningitis developed and persisted for three weeks, leaving the patient in a

most critical condition, from which he finally recovered after a prolonged convalescence.

Our series of cases in which stovain has been used is at present too small to allow of any definite conclusions on these points, but we hope at a later date to be able to arrive at positive conclusions. The absence of any after-symptoms in six, and mildness of symptoms in six cases, however, are facts which we have never observed in twelve successive cases of spinal cocainization.

5. *Motor Paralysis*.—The complete motor paresis of the lower extremities, following the use of the stovain injections, is particularly noteworthy, as compared with the absence of any motor phenomena when cocain is employed. This motor paresis, though variable in extent, was always found to follow the use of fairly large doses of the drug. In view of this point, the suggestion has been made to employ this method in the treatment of fractures and luxations of the lower extremities requiring reduction. We have had no personal experience in this to date.

In reviewing our series of cases of anesthesia by this method, the following points have seemed to us worthy of particular emphasis:

1. Spinal stovainization finds its particular field of usefulness in surgical operations below the umbilicus, especially in genito-urinary and rectal surgery. This is true of all methods of spinal anesthesia, the only difference in the case of stovain anesthesia being possibly the advantages to be derived from the motor paresis of the lower extremities which it causes.

2. Preparatory anesthesia (morphia alone, or scopolamin-morphia) has had no perceptible influence on the production of analgesia. To the contrary, we have noted in the five cases given a preliminary hypodermic that nausea and headache as after effects were complained of, while in the seven cases in which no preliminary hypodermic was given five showed no after effects whatsoever, and the other two complained of but slight headache, persisting in one case for eight hours (Case 10). We have lately discontinued all preparatory hypodermics.

3. *Dose*.—The dose employed in eight cases was gr. 5/6 (gm. 05) of stovain, 2 min. of adrenalin (1/1000). In one instance (Case 7), both cocain and stovain were used, 3 min. of a 4% solu-

tion of the former, and gr. 2/3 of the latter, with the usual addition of adrenalin. The after effects in this case were very slight, and the anesthesia perfect. In one instance (Case 9), gr. 1/2 of stovain was used without adrenalin, with a consequence of less perfect anesthesia.

4. *Area of Anesthesia.*—In every instance we succeeded in obtaining sufficient anesthesia to carry out the operations desired. All cases were examined to determine the limits of anesthesia and of motor paralysis, and the results are noted in the table of cases appended. The lowest limit of anesthesia was found at the level of the umbilicus (Cases 5 and 6); the highest extended about one inch above the mammary line (Case 3).

5. *Duration of Anesthesia.*—This varied considerably, seeming to depend on the personal idiosyncrasy of the patient rather than on the dose given. The shortest time noted was forty minutes (Case 12); the longest interval was five hours (Case 2).

6. *Motor Paralysis.*—This phenomenon was found to vary considerably in extent, though its presence could be noticed in all cases. It was slower in its onset, the anesthesia taking from fifteen to thirty minutes to appear, and usually disappeared first. We found it to vary from none at all (Case 12), a transient paresis of the feet only (Case 9, with small dose of stovain), to complete paralysis of the entire lower extremities lasting five hours (Case 3).

Case 1 is of particular interest, in that it serves as a means of comparison between the use of cocain and stovain in spinal anesthesia. The patient was operated on three months previously by Professor Matas, under spinal cocainization, which was followed by severe and pronounced after-effects, and in which the onset of anesthesia was markedly delayed. The patient himself noticed the difference between the two injections and commented on it.

Cases 2 and 8 showed profound anesthesia and reactionary symptoms, which were apparently the result of the employment of an excessive dose or of a marked idiosyncrasy to stovain. At no time, however, did any alarming symptoms occur similar to those following the intra-spinal injection of solutions of magnesium sulphate, as suggested by Meltzer.

Table of Cases of Spi

No	DATE.	OPERATOR AND OPERATION.	PREPARATORY ANESTHESIA.	DOSE.	TIME BETWEEN INJECTION AND ONSET OF ANESTHESIA.	AREA OF ANESTHESIA
1	2-25-'06	Fistula in Ano. (Dr. Matas)	Morph. gr. $\frac{1}{8}$ Scopolamin gr. 1-150	Stovain gr. 5-6 Adrenalin m ii (1-1000)	3 minutes	To mamma line.
2	2-26-'06	Peri-rectal Abscess. (Dr. Matas)	Morph. gr. $\frac{1}{8}$ Scopolamin gr. 1-150	Stovain gr. 5-6 Adrenalin m ii (1-1000)	Complete in time taken to change to lithotomy position.	Level of c margin.
3	3-6-'06	Ischio-rectal Abscess. (Dr. Maes)	None	Stovain gr. 5-6 Adrenalin m ii (1-1000)	Complete in time taken to change to lithotomy position.	1 inch ab mammæ. found.)
4	3-15-'06	Ext. Urethrotomy, Wheelhouse. (Dr. Matas)	None	Stovain gr. 5-6 Adrenalin m ii (1-1000)	Complete in time taken to change to lithotomy position.	To 10th rib.
5	3-26-'06	Peri-rectal Abscess. (Dr. Matas)	Morphia gr. $\frac{1}{8}$ Scopolamin gr. 1-150	Stovain gr. 5-6 Adrenalin m ii (1-1000)	Complete in time taken to change to lithotomy position.	To umbilicus
6	3-27-'06	Popliteal Aneurism. Matas operation. (Dr. Stafford)	None	Stovain gr. 5-6 Adrenalin m ii (1-1000)	3 minutes.	To umbilicus
7	3-29-'06	Femoral Aneurism. Matas operation. (Dr. Stafford)	None	Stovain gm. .04 Cocain (4%) min iii Adrenalin min ii (1-1000)	4 minutes.	To 8th rib.
8	4-12-'06	Fistula in Ano. (Dr. Logan)	Morphia gr. $\frac{1}{4}$	Stovain gr. 5-6 Adrenalin m ii (1-1000)	Complete in time taken to change to lithotomy position.	To 7th rib. (found.)
9	4-14-'06	Ischio-Rectal Abscess. (Dr. Logan)	Morphia gr. $\frac{1}{8}$ Scopolamin gr. 1-150	Stovain gr. $\frac{1}{2}$	Complete in time taken to change to lithotomy position.	To umbilicus
10	4-28-'06	Fistula in Ano. (Dr. Logan)	None	Stovain gr. 5-6 Adrenalin m ii (1-1000)	Partial in 2 min. Complete in 5 min.	To 7th rib.
11		Tuberculosis of Rectum. Curetment and cauterization.	None	5-6 m ii	3 minutes.	Umbilicus.
12		Multilocular hydrocele. Doyen operation and circumcision	None	4-5	10 minutes.	Limited to scrotal regio

The technic adopted by Professor Matas in his clinic, which was followed in all these cases, has been in the main that recommended by Chaput in the *Bulletins et Memoires Societe de Chirurgie de Paris*, Vol. 32, No. 4, February 6, 1906. After the usual thorough aseptic preparation of skin over the lower portion of the back, the patient is made to sit on the edge of the operating table, with the feet resting on a chair, and the elbows on his knees. The back is

esthesia (Stovain).

RA- T OF ES- SIA.	MOTOR PARALYSIS.	POST-ANESTHETIC SYMPTOMS.	REMARKS.
s.	Complete of legs and feet for 5 hrs.	Slight headache and nausea for 6 hrs. No temp.	Operated 12-8-05 for same trouble under spinal cocainization. Post-anesthetic symptoms more pronounced. Anesthesia more delayed at onset. No motor paralysis.
rs.	Legs and feet for 4½ hrs.	Bad headache and nausea for 8 hrs. Rise o temp. to 100 deg F. in 10 hrs.	Profound reactionary symptoms and anesthesia. Signs of excessive dose.
rs.	Lower extremities for 5 hrs.	None complained of or noted.	Profound anesthesia and motor paralysis.
hrs.	Lower extremities for 2 hrs.	None complained of or noted.	Anesthesia perfect.
rs.	Feet and legs for 2½ hrs.	Nausea and slight headache for 3 hrs. after passing of anesthesia.	Anesthesia satisfactory, but not intense. Tactile sensation not abolished.
rs.	Lower extremities for 3 hrs.	None complained of or noted.	Perfect anesthesia.
rs.	Lower extremities for 4 hrs.	Slight nausea. No headache.	Re-operated 4— for new aneurism by spinal cocainization, with post-anesthetic nausea and headache.
rs.	Complete of lower extremities for 2½ hrs.	Intense headache and nausea for 6 hrs. Temp. rise to 100 deg. F. in 12 hrs.	Profound anesthesia and reaction ary symptoms because of relatively large dose (woman, weight 110 lbs.) Spinal fluid gushed out, showing great tension.
rs.	Transient of feet only.	None complained of or noted.	Anesthesia not perfect, but sufficient. Small dose.
rs.	Lower extremities for 1½ hrs.	Headache for 8 hrs. No nausea or temp.	Analgesia perfect, but some sensation of discomfort while dilating sphincter ani.
rs.	Lower extremities for 2 hrs.	None.	
min.	No paralysis.	None.	Anesthesia slow in onset, but perfect in field of operation. Traction on cord produced nausea.

arched, and the head bent forward in what might be called the "scorcher's" position. If the patient is too weak to be put in this position, he may be turned on his side, with the thighs flexed on the abdomen, and the body bent forward. The fourth lumbar interspace (Tuffier's point) is then located by drawing a line from the highest point of the iliac crests, which line will cross the spinous process of the fourth lumbar vertebra. The skin half inch

below this process is cocainized preparatory to the introduction of the stovain.

A standard dose of stovain of gr. 5/6 (gm. 05) is employed. This is put into a sterile test tube, and 15 to 20 drops of normal saline solution and 2 drops of adrenalin (1-1000) are added. The latter addition suggested by Braun seems to have a marked influence in localizing the drug and in prolonging the anesthesia, as we noted in case 9, in which the adrenalin was omitted with a consequent imperfect and short anesthesia.

The solution having been made, it is then boiled two or three times for periods of one minute, which boilings do not impair its value, as stovain is said to withstand sterilization at all temperatures up to 115° C. (239° F.). A spinal needle previously sterilized by boiling is washed with alcohol, and the excess of alcohol washed out with boiled saline solution. This needle is then introduced into the spinal canal at the point already located, and after about ten drops of the cerebrospinal fluid have been allowed to escape, the syringe containing the stovain-adrenalin solution is attached to the needle, and the fluid slowly introduced into the canal. The needle is then withdrawn rapidly, and the puncture wound sealed with a cotton-collodion dressing.

Those desiring more detailed accounts of the use of stovain in spinal anesthesia are referred to the following recent papers on the subject:

BIERS Present Status of Spinal Anesthesia, *Archives für Klin. Chirurgie*, lxxvii, No. 1.

TILMANN: Lumbar Anesthesia With Stovain, *Berliner Klinische Wochenschrift*, xlii, No. 34, August 21, 1905.

Proceedings of German Surgical Congress, 1905, Symposium on Spinal Anesthesia.

DONNITZ: Technique, Workings and Special Indications of Spinal Anesthesia, *Archives für Klin. Chirurgie*, lxxvii, No. 4.

CHAPUT: *Bull. et Memoirs de Soc. de Chirurgie*, Tome xxxvii, November 4, February 6, 1906.

BABCOCK: *Therapeutic Gazette*, Vol. xxx, No. 4, April 15, 1906.

In conclusion, we desire to express our thanks to Professor Matas for the privilege of reporting these cases, and for valuable suggestions in the preparation of this paper.

It is due him to add that this report of work under his direction, and at his suggestion, is the second American observation to date.

DISCUSSION.

DR. LAZARD would like to hear from Dr. Delaup, who had employed cocain uniformly.

DR. DELAUP had employed plain cocain in some three hundred cases. As far as he could judge, the after-effects from its use had been the same as that reported from the use of stovain by the essayists. In over sixty-five per cent. of the cases there were no after-effects. The most prominent disagreeable symptoms were headache, relaxation of the sphincter, slight rise of temperature—which he did not believe was necessarily due to the injection, but may have been an ordinary post-operative rise—shock, some sweating on the operating table, more especially in females, and the latter may have been due to the fact that they had to be removed a greater distance from the operating room to the ward. Analgesia was uniformly obtained after five minutes. The method was indicated in all operations below the umbilical line. He had obtained good results also in surgery above the umbilicus, but would not advocate its use in such cases. After hearing the reports of the essayists he had to admit that he was not ready to change cocain for stovain. The dose of cocain used by him was very small, $\frac{1}{3}$ to $\frac{1}{4}$ of a grain, and not toxic.

DR. GRANER: The local application of ten to fifteen per cent. of solution of stovain in ear, nose and throat had caused some sloughing of mucous surfaces in the experience of Dr. McKenzie, of the Central London Throat and Ear Hospital.

DR. BRUNS: In enucleation of the eye he has employed $\frac{2}{5}$ of a grain of cocain and 4 drops of adrenalin solution 1 to 1,000, injecting this at four points along the recti muscles. With the exception of the last three cases (all robust men), the results had been very satisfactory, the anesthesia being almost perfect. He has used an ordinary hypodermic syringe, well sterilized, of course. The action of novocain as a local anesthetic in eye cases is not as prompt or as profound as that of cocain. The ophthalmic surgeon is always on the lookout for a drug that will prove as good an anesthetic in eye work as cocain, but without its deleterious effects upon corneal nutrition.

DR. McILHENNY saw Bier, of Bonn, employ stovain by intraspinal injection at the University clinic with very satisfactory results. In recent papers in the German literature, reports of several hundred cases of stovain employed in spinal analgesia, with no ill effects, are recorded. The remarkable point was that Bier allowed the patient to have a glass of milk and a cracker as soon as the bandages or dressings were applied, showing that the procedure caused no nausea whatever.

DR. DANNA thought, some months ago, that cocain spinal anesthesia was as perfect an agent as he had looked for, and with the exception of his first three cases, he had not seen even as much as a post-operative headache in the rest of his twenty-five cases. He believed that shock and bad after-results had been averted by the method which he employed, that of very, very slowly injecting the solution into the spinal canal. After that he employed the method in a case of intravesical hemorrhage resulting from the passage of a sound; the bladder being distended to the umbilicus and filled with large clots. He injected the solution into the spinal canal, and in the time which it took him to put a collodion dressing over the site of the puncture, the patient had become unconscious and rigid. Two or three minutes later he became relaxed, pupils dilated, slow pulse, then ceased breathing. Artificial respiration was begun at once, and had to be continued for one and one-half hours. The patient never regained consciousness, and died within thirty-six hours. Death was not due to uremia, because urine was voided after the operation. After the injection he never had to wait any length of time for anesthesia to begin. Judging from the essay it was evident that stovain did not act quicker than cocain.

DR. MATAS asked Dr. Danna what was the dose administered to the case that died?

DR. DANNA: Ten minims of a 4 per cent. solution. He was now using the method of Dr. Delaup, and found that 4 to 6 minims gave just as good results.

DR. MATAS felt very much interested in the subject discussed, first, because the cases reported by Drs. Maes and Logan have occurred chiefly in his practice; second, because it dealt with an important and comparatively new subject, that of comparing the respective merits of cocain and stovain as regional anesthetics by intraspinal injection.

He considered it a singular and significant fact that the men who first used cocain for spinal anesthesia (Bier, Tuffier, etc.) were now using stovain. He had had so many dangerous and alarming experiences with cocain spinal anesthesia since he began this practice in 1899, that he, like Bier and others, had practically abandoned it. No agent can cause such a profound and lasting impression upon the conducting sensory fibres of the spinal cord without causing dangerous perturbances in the functional mechanism of the organism.

Since we know that three drops of a ten per cent. solution of cocain dropped on the floor of the medulla will cause instant death, the question of dosage becomes one of paramount importance, because if enough is injected some of it may reach the medulla and cause paralysis of the respiratory and circulatory senses. All these anesthetics are protoplasmic poisons. Tuffier, who has had experience with cocain spinal anesthesia in 2,000 cases, was willing to give it up and try something else, and is now using stovain. Dr. Matas' dose has never exceeded five centigrams of stovain, and he thinks there was less headache and fever than with $1/5$ grain of cocain. It is not a question of position, medium of injection or special method of injection. It is the dosage that is all-important. Over $1/5$ grain of cocain should never be used and he had been very much worried by a patient in whom he had injected only $1/10$ of a grain. In his first case which showed anesthesia of the upper extremity and even of the face, the patient had been propped up on pillows and not placed at all in the Tranlenberg position. He would not recommend spinal analgesia as a routine practice, even with stovain.

The points in favor of stovain are its decidedly lesser toxicity and the fact that it can be boiled, adding adrenalin solution to the stovain solution, as recommended by Bier and Braun, enhances its value and renders the anesthesia more permanent.

During the winter of 1899-1900, he had tried spinal anesthesia by the lumbar method with cocain very extensively, and had carefully observed its effects. After an experience of over eighty cases, in his private and hospital practice, he concluded that spinal anesthesia was not to be practiced as a routine method, and that it had its grave disadvantages, and even serious danger. He had had no deaths that could actually be attributed to lumbar infection,

but several narrow escapes, which led him to abandon the practice of spinal injection, except when other forms of general and local anesthesia were especially contra-indicated. Satisfactory anesthesia could be obtained by small and comparatively safe doses. He had learned that any dose above $1/5$ grain was dangerous, and might lead to lasting perturbing effects. He had come to the conclusion that lumbar cocainization was especially advantageous in genito-urinary and rectal surgery, where a very small dose ($1/10$ - $1/8$ - $1/6$ grain cocain) was quite sufficient to obtain a satisfactory anesthesia for the crushing of stone, perineal prostatectomy, perineal drainage, etc., also operated on the uterus by the vaginal route and on the rectum. He found that in these cases, especially aged prostatic patients frequently septic and nephritic, a general anesthesia with ether and chloroform was undesirable, because of secondary after-effects upon the kidneys.

He could further readily understand how genito-urinary surgeons like Dr. Delaup still clung to spinal analgesia as a routine procedure. In consequence of his experience he had limited indications of spinal anesthesia with cocain to a very circumscribed area. Hence his spinal injections with cocain had never exceeded 126, though he had been the first surgeon to apply this method in the United States, as shown by a communication to the *Journal of the American Medical Association*, November 10, 1899, and his contribution to local and regional anesthesia, etc., in the *Philadelphia Medical Journal* of November 3, 1900.

Since observing the effects of stovain, and especially the reports of Bier, Braun, Tuffier and Chaput with mixed stovain-adrenalin injections, he had been tempted to regard spinal analgesia with a more hopeful feeling, and was again trying this combination, as shown by Drs. Logan and Maes' reports, as an anesthetic of greater general utility and wider sphere of usefulness than his former experience with cocain had led him to limit the method with that drug.

DR. LAZARD asked whether boiling of the salts—adrenalin and stovain—together, would not destroy the adrenalin?

DR. LOGAN, in closing: Certainly one should use the less toxic of two drugs. The twelve cases reported tonight were of course only as a drop in a bucket compared with the thousands of cases of spinal anesthesia, but these cases were backed by over two thous-

and other cases reported in the German Surgical Congress for 1905. In regard to Dr. Danna's case, who died following cocaine spinal anesthesia, he would have washed out the spinal canal with normal saline solution, as Meltzer had done in cases which had shown bad results from the intraspinal injection of magnesium sulphate. The rapid anesthesia in Dr. Danna's cases was probably due to the large dose which the doctor had used. The Surgical Clinic of the Medical College had employed all the combinations of stovain and other salts in solution recommended by the Germans, and they had found that the best results were obtained from the combination of stovain and adrenalin, in the proportions mentioned in the report.

DR. PAUL McILHENNY read a paper entitled

Bier's Vacuum Hyperemia in the Treatment of Carbuncle.

Case 1. Dr. J. H., white male, 30 years, single. Family history, cancer. Personal history, negative. Venereal history, negative.

Trouble began on May 9, 1906, with a burning and itching sensation on the back of the neck, to the left of the median line. A light local tenderness, with small hyperæmic area.

May 10. Local tenderness was increased. Occipital and subclavicular glands enlarged, muscles sore.

May 11. Glandular swelling increased. Headache, temperature 101. Great discomfort. Muscles at back of neck very tender. Malaise.

May 12, P. M. When I saw the patient for the first time, he having been referred to me by Dr. Logan, I found him to be suffering with a well marked carbuncle about the size of a walnut, localized and very indurated and presenting three heads. Bier's vacuum hyperemia, by means of his cupping appliances, which I will presently show, was applied for three-quarters of an hour, with application of five minutes' duration and two to three minutes' intermission. The cup was applied directly over the carbuncle so that the head or heads were as near the center of the cup as possible.

After fifteen minutes the inflammatory area was more localized, and there was an exudation of bloody serum, which soon changed to clear serum.

There was a slight burning pain while the cup was on, but the dull pain was relieved after about half an hour of the application. Two hours later the pain was much reduced and the patient was more comfortable.

May 13, A. M. Bier's vacuum hyperemia was again applied for a half hour. Since first application inflammation appeared more localized. Glands not changed.

P. M. Vacuum hyperemia again applied for half an hour. Pain markedly reduced. Glands very sensitive.

May 14. Application in the morning caused an exudation of pus and serum. Glands better and somewhat reduced. Headache not so excessive.

P. M. Application drew out core. Very sensitive area did not appear so angry.

May 15, A. M. Much better. A large plug of necrotic tissue was removed with forceps before the cup was applied. Glands not so tender and markedly reduced. No more pain in neck and head. Microscopical examination of pus showed staphylococcus aureus in large quantities.

P. M. Area of induration markedly diminished and glands greatly reduced. No more pain or sensitiveness.

May 16. Patient was quite comfortable. The cavity was gently curetaged, and then cleaned with, first, peroxid, and then iodine. The cup was then applied for a half hour. The evening application was discontinued.

May 17. Patient quite well. Cavity nearly healed up. Last cupping, after which dressings were discontinued.

On May 20 the same patient had a burning and itching sensation about two inches below and slightly to the left of the seat of the previous trouble, as if a new infection had taken place.

May 21 showed a small papule below the seat of the old carbuncle, very tender and surrounded by an area of hyperemia. Vacuum hyperemia was applied as in first instance.

May 22. Area increasing, no pus, cupping applied once.

May 23. Slowly enlarging. Cupping applied in morning and evening.

May 24. Condition somewhat worse. Glands enlarged and tender. Center of furuncle was opened by incision and cleaned out with peroxid and the iodine. Cup was applied once. Staphylococcus found in pus in large quantities.

May 25. Better. Cavity cleaned as on previous day. Cup applied once. Glands reduced.

May 26. Cup applied once. Discharged as cured.

CASE NO. 2. Mr. R., white, male, 27 years, single. Seen first on May 16 by Drs. Logan and Hume. Had been suffering for about ten days with two furuncles on the back of his neck. Examination showed a new one of three days' duration, with two papules about as large as a pin head, and a hyperemia area about the size of a ten cent piece. Slight induration, no radiating tenderness. No glandular enlargement. Cupping was applied for about fifteen minutes. A large amount of bloody pus was evacuated and the hair extracted. It was then cleaned out with pure carbolic acid.

May 17. Cup was applied once for fifteen minutes. Area more localized. No pain.

May 18—Cured.

The first carbuncle in Case No. 1 is the only one that can be considered as having been treated with the hyperemia alone. With the second carbuncle of Case 1 the patient was unwilling to have the applications last three-quarters of an hour, as he had very little time, and consequently the hyperæmia could not get in its good work. However, it certainly helped, for the trouble was cured in six days, whereas it might have lasted three weeks if the old routine of treatment had been used by itself.

Case No. 2 was not a typical case either, but I consider that the hyperemia had a better chance in that one than with second trouble of Case No. 1.

Bier speaks of a case of carbuncle, about three inches in diameter, in a girl sixteen years old, in which the purulent discharge ceased after four days of the application, and in twelve days the case was discharged cured. When we realize how long the old routine of treatment took, it seems most remarkable that this simple method should possess such powers.

These little glass cups with these rubber bulbs of about two inches in diameter, seem very weak, but Rube, in his experiments, found

that one of these little appliances could cause a vacuum equal to from 200 to 400 mm. of quicksilver.

We do not know the limit of usefulness of this treatment, but some of the troubles in which it can be used with great benefit, as laid down by Bier, are furuncles, carbuncles, bubo, acute abscess, mastitis, old and fresh infected wounds, and in localized tubercular areas.

It is contra-indicated in diabetes, and if used for carbuncles, etc., in these cases causes a necrotic area as large as the rim of the cup, which sloughs out in from two to three days, leaving a ghastly cavity which rather appals one.

The great advantages of this treatment are twofold: 1st. It hastens the formation and evacuation of pus, is germicidal, and relieves pain. 2d. It is not dangerous in the hands of patients.

According to some observers the reason it relieves pain is because it causes practically the same condition as does the Schleich's infiltration method. Other observers state that it relieves pain by washing away the products of disease, which, by irritation of the nerve cells, produce pain.

That it has germicidal properties has been shown by the experiments of numerous observers, among whom is Colle, who, in a recent copy of the *Müchener Medizinische Wochenschrift* gave the results of his experiments. He obtained pus from an empyema of the elbow and suspended it in bouillon. To one-half of this he added some serum taken from the same arm and injected it into mice. All the mice were sick but none died. He then took the remaining culture and to it added serum obtained from the other arm; this he also injected into mice and they all died, showing that the serum from the *healthy* arm had no effect on the pus, and that the pathological changes in a *diseased* part caused a formation of anti-bodies which possessed a bacteriocidal action.

I hope later to present a more thorough paper on this subject, and hope in the meantime that the members of the society will give it a trial when they have the opportunity.

DISCUSSION.

DR. BRADY obtained good results in a case of carbuncle after treatment with an ordinary breast pump during a period of a week.

DR. SAMUEL LOGAN had a patient suffering with a large car-

buncle, with secondary inflammation of all the post-cervical glands, and had intended to remove an area at least the size of a dollar. This patient was referred to Dr. McIlhenny, and after about a week of treatment by the Bier method, marvelous results had been obtained. Lately, he had made use of the modified Bier method in paronychia, with excellent results.

MEETING OF MAY 12, 1906.

DR. A. G. FRIEDRICHS presented a case of

Fracture of the Superior Maxilla Successfully Treated by the Use of the Interdental Splint.

The fracture was caused by a kick from a mule, and when the doctor first saw the patient the bones had already united in marked deformity. He took an impression of the fractured jaw just as it was, in malposition, then established a correct articulation of the two jaws. In order to accomplish a perfect alignment he sawed through the cast of the fractured jaw, brought the two fragments into position, and maintained them so by the use of the interdental splint, which the patient is now wearing and which permitted him to eat without pain.

DR. HOMER DUPUY read a paper entitled

Report and Exhibition of a Case of Acute Endomastoi- ditis, with Thrombosis of the Lateral Sinus.

Sidney F., aged 14, had an attack of grippe in the beginning of March, 1905. Dr. W. H. Robin noted nothing unusual until about the 10th, when the patient complained of pain in the left ear, with impairment of the hearing. Previous to this no symptoms pointed to involvement of the ear. On the 10th of March a chill, temperature 104° F., aroused the doctor's suspicions, and directed his attention to the ear. I saw the patient on the 11th, who presented symptoms simplex of middle ear abscess, with involvement of the mastoid. Assisted by Dr. Robin, under bromide of ether, I incised the drum and ordered the ice bag to mastoid. Temperature fell

gradually after this, reaching normal on the morning of the 13th. At midday, however, another chill, and a temperature rise of 103° .

After my incision of the drum on the 11th, the discharge from the ear was purulent, but notably scant. The whole picture, to my mind, pointed to pus in the mastoid, and I advised early operation.

March 14, 1906, mastoid opened and found extensively diseased by an osteomyelitic form of inflammation. Mastoid cells in the tip, those contiguous to the bony wall separating the lateral sinus from the mastoid, the mastoid cells and the antrum, each received careful curettage. Next day the temperature dropped to normal and remained so for two days. On the 17th chilly sensations noted by the night nurse and the temperature began to rise and fall, the variations for three days ranging from 103° to 99° . Inspection of the wound revealed nothing to account for these unusual post-operative phenomena. Malaria was suspected, microscopic evidence was negative and quinin had no effect on the temperature. Excluding all other possible causes, the continuance of chilly sensations (no marked chill being noted), a temperature rise on the 19th to 104° , made me decide to open the lateral sinus. Drs. W. H. Robin and Gordon King saw the patient with me, and concurred in my view that the sinus was the possible cause of all this trouble.

On the 19th, seven days after the first operation, exposed the sinus for an inch or more. Its wall was thickened and its contents were wanting in the bluish outline of a normal sinus. It did not pulsate. An exploring needle introduced into its lumen brought out no fluid. I then slit the wall for an inch or more, no flow of blood occurring. A curette passed in the vessel brought out a clot of blood; some of the clots protruded to the cut in the vessel wall. They were more or less adherent to the inner course of the vessel. Gentle curetting towards the torcular shortly re-established the circulation from above and it was noted that the flow also came from below. I deemed it best not to be too aggressive in removing the blood clots for fear of disseminating the infective particles into the general circulation. Pressure with gauze pledgets against the vessel brought the walls in close application, this method being used to bring about complete obliteration of the mastoid portion of the sinus.

A careful watch by Dr. Robin and myself for metastatic abscesses revealed nothing to retard the quick progress of the case toward complete recovery. Temperature returned to normal and eight days after the operation I dressed the wound and found the sinus in the mastoid obliterated. I now present the little patient, seven weeks after the first operation.

REMARKS.

This complication in aural suppurations is not common. Experience in mastoid surgery is showing that inflammation of the myelitic type, characterized by disseminated areas of healthy and diseased tissues, are liable to give the most trouble, as we are apt to leave behind our first operation a latent and unsuspected infective focus which ends in future and most serious extensions. This case is an example of just such a form of mastoiditis. The scant aural discharge, despite the free drum incision, is to be noted, as I have frequently observed this in grippal otitis, and it not infrequently ended in mastoid complications.

Chills and sudden high rises of temperatures, with quick declines, in a case showing undoubted trouble in the mastoid, are highly indicative of a sinus involvement. In this case there are a few clear-cut chills previous to the simple mastoid operation. The appearances in the mastoid and inspection in the region of the sinus did not give the faintest evidence of its involvement at the first surgical interference. The posterior cells lying on the sinus wall evidently contained infective material not discovered at the time of the first operation. The chilly sensations were observed only after the first operation. Modern otology attaches great significance to their occurrence during mastoid troubles. The distinct chills will hardly escape us, but these faint chilly sensations may not attract attention. In my case they were duly noted and helped materially in pointing to a sinus affection.

The absence of metastatic abscesses and the obliteration of the sinus by pressure, without ligation of the internal jugular vein, are noteworthy. Otologists are still divided as to the advisability of ligating the jugular. Statistics show that as many cases recover without as with ligations. I shall not elaborate on this phase of the question, but content myself in simply recording one more cure without ligation.

In this instance I watched for any signs of the phlebitis extending downward into the internal jugular, my intentions being on the first positive proof of this to immediately ligate the vein in the neck. Opening and curetting the thrombosed lateral sinus is one of the brilliant achievements of modern otology, as without operation very few cases ever recover. The early interference in my case, owing to the fact that the thrombosis was a mural one, assisted materially in obtaining a speedy cure.

DISCUSSION.

DR. FEINGOLD: The main point at issue is whether the jugular vein should be ligated or not. If it is not ligated the operation is shorter, simpler and there is no resulting scar in the neck. However, there are two strong points in favor of ligations: 1. Some trouble with the anesthetic occurring at the time when the lateral sinus is being opened may cause inspiration of air into the larger veins. 2d. After ligation of the jugular vein a thorough inspection of the sinus can be made as low down as it is wished, and points of infection may be found which otherwise would escape detection. He favors ligation of the jugular vein.

DR. DUPUY, in closing, said that the danger of metastatic abscesses are not entirely prevented by ligation, and that the highest authorities are divided on the subject of ligation. Ligation of the jugular vein in two places, one of these low down near the clavicle, with dissection of the vein, as advised, is tedious and difficult. He has never seen death caused by inspiration of air into the lateral sinus during mastoid operations, and as far as he knows there is only one such case on record.

DR. H. D. BRUNS read a paper entitled

Diphtheria of the Conjunctiva in the Far South.

By diphtheria of the eye we mean an inflammation of the conjunctiva caused by the specific poison of the disease. In Continental and English and many American textbooks we find the affection described as characterized by discoloration, swelling and boardlike hardness of the lids, which cannot be everted and scarcely drawn

apart. A thin serous exudation escapes and on the swollen, red palpebral conjunctiva, sometimes even on the bulbar, are seen patches of deep infiltration like bacon fat. When the thick, resistant membrane of these patches is torn away a granular, bleeding surface is left. The disease is rendered preëminently dangerous to the eye, says Fuchs, because in all severe cases there is a simultaneous purulent inflammation of the cornea. However, most of the text books add that the disease in its severe forms is uncommon save in countries where diphtheria prevails, as Russia, North Germany and Southern France.

On the other hand, although the croupous form of simple conjunctivitis is described, no mention is made in the recent texts of Fuchs (1899), de Schweinitz (1892), Swanzy (1903) and Juler (1904) of the exceedingly mild guise under which diphtheritic conjunctivitis shows itself in this region. But Ball, in *Modern Ophthalmology*, recites the views of Coppez. In this city all the cases I have been able to recognize during an experience of more than twenty years are mainly noteworthy from the total absence of all severe symptoms. In appearance they could by no means be distinguished from mild or moderate cases of ordinary, simple conjunctivitis, *sometimes*, of the croupous type; *i. e.*, showing upon the palpebral conjunctiva a pellicle more delicate than the lining membrane of an egg, which being stripped off leaves behind a raw, bleeding surface and reforms, more or less rapidly, within twenty-four hours. I have seen diphtheritic conjunctivitis usually in babies, who appeared to be ailing, though by no means ill, but I have also seen it in a fine sonsy looking child entirely free from fever. In a clinic where microscopical examination of all conjunctival discharges is not part of the routine examination on admission, many cases must be overlooked, and I have no doubt overlooked many. In private practice I have never identified it. I do not feel sure as to what aroused my suspicions in each case and caused me to have bacteriological examinations made. Usually, but not always, it has been the presence of the "croupous" membrane. On the other hand the pathologist has reported negative findings in severe croupous cases, when I confidently expected identification of the diphtheritic germ.

Cause. The disease is caused by the inoculation of the conjunctiva with the Klebs-Löffler bacillus. This, it is said, may arise

by infection from the nose, throat or other previously affected part of the patient, but such cases have not come under my observation.

Race, Sex, Age. During the past twelve years, out of 23,198 cases, the disease has only been recorded eight times in my clinic; a number utterly useless, of course, for purposes of deduction. Of the eight, two were males, six females; the ages ranged from two months to six years. Writers uniformly agree that the disease is usually one of early childhood. All of these patients were white, and I cannot recall ever having seen a case in one of negro blood.

Symptoms. The severe cases are said to be painful, as may readily be believed from the description, but in the disease as I have seen it, symptoms, like characteristic appearances, are chiefly conspicuous by their absence.

Diagnosis. This depends upon the making and observation of a proper culture from the secretions of the affected eye, examination of a properly stained portion with the microscope and the finding of the Klebs-Löffler bacillus.

Prognosis. In this, the only type of the disease I have ever seen, the prognosis is absolutely good. In the severe cases it is said to be frightfully bad.

Treatment. Treatment consists in the subcutaneous injection of the diphtheria antitoxin. Two cases identified before the invention of this remedy were treated by applying mild solutions of silver nitrate to the everted lids, together with a peroxide of hydrogen wash. They recovered uneventfully in eighteen and twenty days. These cases occurred in July and August. Before the discovery of the bacillus, I doubtless treated many in a like manner without distinguishing them from ordinary catarrhs. The six other cases treated with antitoxin were cured in from six to twenty-three days. A borax-boracic-acid-camphor-water wash was used for its cleansing and grateful cooling effect. Nowadays we are unable to keep track of these cases, for as soon as a positive diagnosis is made they must be reported to the City Board of Health and they pass from under our observation.

Indeed, as I have insisted before and elsewhere (NEW ORLEANS MEDICAL AND SURGICAL JOURNAL), the one important feature of diphtheria of the conjunctiva, as we see it in New Orleans, is that it might be the obscure source of a general infection; the infecting child never being suspected of having more than "common sore

eyes" or "a cold in the eyes," and yet conveying to a school or play-mate a dangerous systemic disease.

Here attention should be drawn to a paper on primary nasal diphtheria by Dr. Homer Dupuy, read before this Society and published in the *NEW ORLEANS MEDICAL AND SURGICAL JOURNAL* for January, 1906. In this paper Dr. Dupuy calls attention to the very slight symptoms and therefore to the very grave danger of infection in this condition. He says, speaking of the difficulty of distinguishing between fibrinous rhinitis of diphtheritic and of non-diphtheritic origin: "The microscope is, after all, the crucial test, for it cannot be emphasized too strongly that the clinical behavior of these two forms of membranous rhinitis is so similar, particularly the mild diphtheritic variety, that a naked-eye diagnosis is absolutely untrustworthy." He insists strongly upon the use of the anti-diphtheritic serum in these cases and closes by reiterating their great danger as a source of infection. A table prepared for him by Dr. Kookan, Resident Surgeon of the Eye, Ear, Nose and Throat Hospital, shows that, from 1896 to 1904, eighty-one cases of fibrinous rhinitis are recorded. Thirty-four were non-diphtheritic and forty-seven diphtheritic. This differentiation is based on microscopic examination.

Thus a great similarity is seen to exist between diphtheria of the mucous membrane of the nose and that of the eye, as they are observed in this city.

Since this was written I have seen a white child affected with both the nasal and conjunctival forms. Beyond having to breathe through its mouth, the child appeared to be in no way discomforted, and the mother believed it to be suffering from an ordinary cold only.

DISCUSSION.

DR. SALTER: The paper just read by Dr. Bruns has thoroughly covered the subject and there is but little to add. As to the mildness of the condition in this locality, I can concur with the doctor, having seen five cases, including some mentioned in his paper. Hanke, of Vienna, lays special stress on the fact that "diphtheria of the conjunctiva (infection) may assume all forms of acute conjunctivitis, from a simple catarrh to a severe infiltration of the whole palpebral and bulbar conjunctiva. Necessary as is the cer-

tain diagnosis of 'diphtheria,' it is extremely difficult, since only a complete bacteriological examination with smears, cultures and animal inoculations gives a conclusive result." In the discovery of the diphtheritic serum the diagnosis is, however, facilitated, because this important curative agent at the same time possesses much value in the differential diagnosis. It is important, first, to make a clinical diagnosis, then have the serum administered, and after this have a bacteriological examination and an animal inoculation made. These should be done as soon as possible. It is often necessary to resort to animal inoculation, because the presence of rods like the diphtheria bacillus is not diagnostic, since the xerosis or pseudodiphtheria bacillus behaves similarly both to stains and in cultures, and this should be insisted on in mild variety. Most writers agree that diphtheria can be both primary and secondary. Coppez denies the existence of primary diphtheria of the cornea, and says, "that this corneal condition is due to infection by the xerosis bacillus." The early administration of the serum, according to the foreign ophthalmologists, does not prevent the invasion and destruction of the cornea by this disease, and most American ophthalmologists agree with the foreign ones, except Ball, of St. Louis, who states that "the earlier the serum is administered the less will be the danger of corneal sloughing." Epidemics of this disease have been reported in Berlin. Fatalities have also been reported, as many as forty patients; Graefe had three deaths, Gilbert reported four deaths, and Widmark had one fatal case. This was in the pre-antitoxin days. Sterling, of Montreal, reports four cases of Perinaud's conjunctivitis, with extreme swelling and broad-like hardness, and involvement of the pre-auricular gland and glands of the neck, constitutional disturbances which simulated diphtheria of the conjunctiva to such an extent that he immediately injected antitoxin and had a bacteriological examination and an animal inoculation made, which all tests were reported negative; then the true condition was diagnosed. Sterling cases are extremely interesting and important, and should be taken into consideration whenever we have any lid condition which is suspicious of diphtheria.

DR. DANNA: The general practitioner knows nothing about eye diseases, and often regards the oculist as he does every other specialist, as prone to do a certain amount of humbuggery. We all like

to boil down the facts in a case. He wished to thank Dr. Bruns for bringing to our attention this new source of danger which may exist in our midst, and of which we do not often dream. He only saw two cases. They were cured by the injection of serum and the use of a mild eye wash.

DR. DUPUY: In a considerable experience with nasal diphtheria he had not seen a single case of the conjunctival infection. This seems remarkable when we remember the existing tendency to connect all inflammations of the nose with those of the conjunctiva. He asked Dr. Bruns to state whether, in a case in which diphtheria had existed in both the eye and nose, the primary infection was in the eye or nose?

DR. BRUNS said he had refrained from saying anything about the severe form, being concerned only with the disease as he has seen it in New Orleans. The disease could exist in the conjunctiva without causing any symptoms, but even in this mild form it is probably capable of inoculation and can work great harm. In answer to Dr. Dupuy, he could not say whether, in his patient, the eye or nose had been first infected. In any case of conjunctivitis in which we get a positive report from a reliable pathologist, the best thing to do is to inject antitoxin serum at once and arrest what may become a serious trouble, resulting possibly in the destruction of the eye or the infection of others. In the event that the bacillus of xerosis or some other may have been mistaken for the diphtheria bacillus, no harm would have been done. Such instances would be extremely rare and we should take no chances.

DR. J. A. DANNA read a paper entitled

Osmic Acid Injection for Trifacial Neuralgia With Report of a Case.

Those of us who have seen a severe case of trifacial neuralgia need no vivid description to recall to mind the expression of helpless agony depicted in the face of the poor unfortunate. The grave of many a suicide has been filled by the self-destruction of a poor sufferer who could no longer endure such a life of suffering. Yet these cases go from doctor to doctor for years without any decided relief. Usually they go from bad to worse. Anything or any pro-

cedure therefore, that will convert one of these poor unfortunates from a condition of misery to one of the enjoyment of a useful life, is worthy of note, and should be given the widest publicity. I will not discuss the many remedies put forth and more or less generally used for this affection, and will only mention the operations for the excision of portions of the many branches of trifacial nerve. Where the particular branch involved alone has been resected, in the great majority of cases the pain has recurred, either in the same or in some other branch, and even where all the branches have been resected return of the pain has followed in many instances at some future time. The removal of the gasserian ganglion as an operation of last resort is perhaps the only operative procedure that affords hope of permanent relief. The removal of the gasserian ganglion, however, is an operation of great severity, possible of being done only by a surgeon of the greatest ability and experience, and the mortality percentage is so serious that surgeons regard it with awe and dread and the number of such operations is therefore necessarily small.

In the osmic acid injection we have an operation easily and quickly done by any surgeon of moderate experience, which does not materially shock the patient and hence is practically not at all dangerous to life, does not disfigure or scar the patient, the only external incision required being half an inch in length over the supraorbital foramen; does not keep the patient in bed after recovery from the effects of the anesthetic; has been known to give immediate and permanent relief to a large number of cases, many of them of the worst and most severe forms, and is applicable to all cases as it can be done with local anesthesia if necessary.

While on my summer vacation two summers ago it was my good fortune to attend the clinic of Jno. B. Murphy, of Chicago, and among other things I saw him do this operation on two patients. The ease with which he did it, the success that had attended his former operations, and his enthusiasm in regard to the method impressed me very much, and I decided that I would give this method a trial at the first opportunity. Strange to say, while I had occasion to observe many severe cases of trifacial neuralgia before this time, in the years that have elapsed since then I have been able to see but one case. (Perhaps it is because they know that I am on the lookout for them.)

This case was sent to me by Dr. Cazenavette, to whom I mentioned the matter of my experience in the course of a conversation, and who had been treating this patient for some time. I will not go into the discussion of the mode of action of osmic acid when injected into a nerve trunk, but will relate my experience showing what it has done in this one case.

When I first saw her I was at once struck with her facial expression, or rather lack of expression. Her face was an immovable mask, she did not speak one word more than she could help, and did not use her lips in articulation. She spoke with her tongue, only using t's for k's, d's for b, etc.

She said she was willing to undergo anything that promised any relief. She had seen many doctors during the ten years that she had been afflicted, and had taken many different remedies. She had had electricity in many forms, and the X-ray applied for long periods without any relief, and when I had explained to her what I intended doing she readily consented.

She gave the following history: Ten years before, she began at times to have a severe neuralgic pain in the inner margin of the left nasal orifice. The pain area seemed to increase with every repeated attack till the whole left side of the face became involved. This pain was brought on by any sudden or severe irritation of the skin of the face, the degree of irritation necessary to produce an attack diminishing progressively till she reached the state where she could not bite or chew solid food. Later washing the face and even the application of a glass to the lips to take a drink of water excited an attack, the consequence being that she went for weeks without washing her face, and for days at a time without even a drink of water. After eight years the pain spread over to the right side and gradually involved the whole face. She went for nights without sleep, as the slightest jarring of the bed or sudden noise would incite a paroxysm. She says now that considering the loss of sleep, the anxiety and lack of nourishment for such lengths of time, she wonders that she is alive today.

Her husband died just before she first began to have pain, and she established a little store to help earn a livelihood, but she soon had to give it up because she could not get about and talk to customers without risking a paroxysm. She dreaded, even after giving up the store, the visit of some friend for fear of having to speak and

possibly excite the pain. She had even instructed her relatives to turn her body, after her death, over to the Medical College, so that they might examine her brain and be thus enabled to intelligently diagnose and possibly effectively treat some future similar case. She wanted, if possible, to spare any other person in the future the terrible suffering that she had undergone.

This was the picture that presented itself to me.

Operation: On May, 1905, under chloroform anesthesia, following the technic as done by Murphy, I made a half-inch incision over the left supraorbital foramen through the skin of the eyebrow, and exposed the supraorbital nerve. A blunt hook was now passed under it and swept around so as to hook up its entire expansion. About five drops of a 2% solution of osmic acid were now injected into the nerve, and three or four more into the supraorbital foramen. The nerve was now released, the excess of acid sponged out and the incision sutured with two catgut sutures.

The upper lip was now raised, an incision made in the mucous membrane at its point of reduplication from lip to gum, and extending to the periosteum of the superior maxillary bone, the soft parts dissected and retracted upward and forward till the infraorbital foramen was reached, when a blunt hook was swept around the foramen and the branching expansion of the infraorbital nerve gathered up by it, and about 5 minims of 2% osmic acid solution injected into the nerve, and 3 minims into the foramen. The excess was sponged out, and the mucous membrane sutured with two sutures.

The lower lip was now lowered and the mental nerve and mental foramen exposed and injected in the same manner as the infraorbital.

A mouth gag was now introduced and the jaws opened, and the posterior palatine nerve and foramen exposed and injected in the same manner in the posterior angle of the hard palate. These incisions were all sutured with two catgut sutures each. This completed the operation and the patient was returned to her bed.

When she awoke from the anesthetic she was absolutely free from pain. She placed her hand on her face and was delighted at the failure to bring on a paroxysm of pain. Thus she passed from a condition of extreme misery and despair to one of happiness and hope.

As this was something new that I had not tried before I injected only the left side, which was the side most painful and originally involved. I intended later to inject also the right side if the first operation was successful, having no doubt of my ability to get the consent of my patient. However, the relief was so complete that she refused at first to have it done, promising faithfully that she would if the pain should return. She returned home nine days later a happy creature, with many expressions of gratitude for what had been done for her. She returned two weeks later with a small abscess, about as large as an ordinary boil, over the site of the infraorbital injection, which was opened and healed in a few days.

Two months after the operation she began to have some pain on the right side, the side not operated on. But the pain is so insignificant in comparison with what she had before, and as it shows no tendency to get worse, she hesitates to undergo the disagreeable experience of taking an anesthetic for its relief.

Today she is a happy housekeeper, doing all her own cooking, washing and housework. She smiles and talks as much as ever, but though she uses her lower lip freely she does not move her upper lip either in speaking or smiling, but rather from force of habit than otherwise; for it is not paralysed and she can move it at will, nor does it pain her to move it. Sensation is normal throughout her face with the exception of one or two small areas on her forehead, though there was almost complete anesthesia of the left side immediately after operation.

This case has now been operated on nearly one year (May 24, 1905), and even if the condition should recur (which I am far from conceding as a probability) she has at least had this much relief. However, Murphy and others who have had experience with this operation report results which promise to make this the most popular and reliable operation for the relief of trifacial neuralgia.

DISCUSSION.

DR. GRANER: Any one who seen these wretched and unfortunate patients, and who, after using all means at his command, has failed to relieve them, must be glad to hear of Dr. Danna's good results. He saw one case where division of the nerve was performed, but the patient derived no benefit whatever.

DR. BATCHELOR: The subject treated in Dr. Danna's paper is one of great importance. It is only necessary to remind you that, out of 700 cases of neuralgia collected by Conrad, 33% were of the tri-facial type. Numerous remedies, both internal and external, have been tried with disappointing results in most instances. It is not necessary here to review the therapy of the internes employed in those cases. Suffice it to say that after all other measures have been exhausted these cases fall into the hands of the surgeon. Various procedures of a surgical nature have been employed for the relief of this condition. Section of the peripheral branches of the nerve involved was one of the methods tried. Some success in some cases was obtained. Relief for a period varying from ten months to four years has followed, but as a rule the pain recurs and the results are greatly disappointing. In view of the fact that only one surgical procedure guarantees a sufficiently large percentage of cures, and that this procedure is followed by a high rate of mortality (17%), the profession is seeking a remedy calculated to supplant the imperfect and more serious medical and surgical treatment. This much may be said in favor of extirpation of the gasserian ganglion, that 93% of those that survive are cured. Referring to the subject matter of the paper under discussion, the osmic acid treatment is in all respects alluring to the profession, particularly so when we compare its safety and harmlessness, and its apparent good results, with the bad success of other methods, and the high mortality rate from extirpation of the gasserian ganglion. We therefore look into the future with great hopefulness that in osmic acid we have found a means for the relief of that fearful malady, tic-douloureux. There is one point in the technic of this treatment that should be particularly emphasized, neglect of which is accountable for a certain percentage of the failures that have followed the use of osmic acid injection. The injection should be direct; the nerve should be exposed and a sufficient quantity of a freshly prepared solution should be injected directly into the nerve substance. The haphazard method of injecting at random into the tissues contiguous to the nerve is calculated to bring the method into disrepute. This is a subject of the greatest interest for various reasons. In the first place we are very much befogged in our knowledge of the pathology of tic-douloureux, many authorities disagreeing upon the changes found in the nerve tissues and causes of the same. The

mode of action of osmic acid in bringing about relief is a matter concerning which we are in almost total ignorance. It is known, to be sure, that osmic acid causes liquefaction of fat and that this liquefaction exposes the nerve trunk and produces nutritional changes in the nerve. Further than this we are in doubt. We know that in the pathology of this condition there is narrowing of the lumen of the vessels supplying the nerves; that there is endarteritis. Changes have been found in the gasserian ganglion, but pathologists dispute the cause of those changes. The entire subject is one for the future.

My experience in the treatment of this condition is embraced in one case. Sufficient time has not elapsed to warrant me in asserting a cure. I will say, however, that the patient is relieved up to the present. The patient I refer to was a man seventy years of age, dating the first paroxysm of the disease to a period ten years back. There followed a quiescent period of over twelve months after the first paroxysm; the pain then recurred. After this recurrence he suffered with irregular paroxysms at periods varying from six months to one month. This state of affairs persisted up to eight months ago. During the past eight months the disease assumed so aggravating a turn that the man was scarcely free of pain two hours at a time. When he fell under my observation his condition was truly pitiful. The slightest breath of air, any attempt at talking, a sudden noise, to swallow, or to open his mouth, would bring on a violent paroxysm. The expression of pain marked upon his countenance was indescribable. He himself said he was on the verge of insanity. I found on examination that the inferior dental branch alone was involved. A trephine opening was made into the jaw over the site of the inferior dental foramen, the nerve exposed and severed. I divided the nerve with the idea that by injecting down the axis more fluid could be used. I injected both the proximal and terminal portions of the nerve, using a 2% solution of osmic acid. I presume about seven drops were injected into the nerve itself. I do not believe it possible to inject more than seven drops. The wound was closed and sealed. The patient derived a certain amount of immediate benefit, in that whereas a paroxysm had occurred every few minutes prior to operation, none occurred after the operation until twelve hours had elapsed, at which time he had a violent paroxysm. Six hours after this paroxysm there

was another less severe. Eight hours later another, marked. Three days elapsed, now and then another paroxysm. This ended his trouble, and during the past four weeks he has been free of pain.

DR. CAZENAVETTE saw the case reported by Dr. Danna. He had never before seen such a picture of pain and misery. The patient would not speak for fear of bringing on a paroxysm. He was delighted to hear of such complete recovery following a comparatively light operation. Some cases yielded to internal medication. In the mild cases he obtained good results from large doses of quinin.

DR. SALATICH: The pain was on both sides. Dr. Danna had only injected the terminal branches on one side. He would like the doctor to explain how the injection had succeeded in relieving the pain in the opposite nerve trunks?

DR. DELAUP spoke of the anatomical difficulties of exposing and dissecting out the small nerves, such as those which Dr. Danna claims to have injected with osmic acid. Also the difficulty to inject even a few drops in a large nerve trunk like the sciatic, unless the injection was made in several spots, and as for the smaller nerves he thought that injection into them at all was an impossibility. The injection must have been made in the tissues formed by the nerve, the artery and the vein, which accompanied them.

DR. VAN WART: According to the pathologists, the condition is due to changes occurring in the cells themselves, in the arterial supply of the ganglia or in the nerve sheath. Resection of the sensory root of this nerve has been tried and in this way resection of the gasserian ganglion has been avoided. For the past seventy-five years almost every remedial agent has been tried and failed. Osmic acid was first made use of by the French, and later given up. It seems certain that osmic acid has a tendency to dissolve fats, and in that way it may destroy the myelin and thus expose the nerve after depriving it of its sheath. No case can be considered cured under two years, as many cases seem to be well for a time, when the pains return. Bilateral cases are very rare, and, as a rule, the pain on the opposite side, the one least affected, is a pain of irradiation, a sympathetic pain. Relief on the side first affected is usually followed by relief on the other side. As many cases have been relieved by medicine as by surgical operations.

DR. SAMUEL LOGAN: Resection of the gasserian ganglion is exceedingly difficult, even on the cadaver. He saw Dr. Finney treat cases of torticollis by injecting osmic acid into the spinal accessory nerve. The pain was immediately relieved, and up to the time he left the clinic it had not returned.

DR. JACOBY: Since Dr. Murphy's first writings on the subject of osmic acid injection, he has seen no further report in the literature, and it would be interesting to know the ultimate results in the cases then reported. He had made use of chloroform in a case of sciatic myalgia, injecting the chloroform in the tissues about the nerves with an attempt to inject it into the nerve proper. This procedure was followed by relief of the pain, which relief has now lasted for a period of about fourteen months.

DR. DANNA, in closing: Two very important points were brought out by Dr. Batchelor. The first one was the injection of osmic acid into the nerve itself; second, the injection in all the accessible branches of the nerve. He had seen one case in which the injection was made in the neighborhood of the nerve, with aggravation of the condition. This he had no doubt was due to the fact that the irritant had been placed near the sensory filaments of the nerves, but without destruction of the latter. He only advises the injection of osmic acid after all other simpler and ordinary plans of treatment have failed. This injection involves so little shock and danger to life that he would recommend it before any other surgical operation. He thought that injection in the supra-orbital foramen to be of more importance than injection in the nerve itself. He does not believe that he succeeded in injecting more than about one and a half minims of the acid into the nerve, but used from five to six minims in order to make sure that that much would reach the nerve itself. As much more was injected into the foramen. He cannot explain the mode of action of the osmic acid injection, especially with regard to the relief of pain on the opposite side.

N. O. Medical and Surgical Journal

Editorial Department.

CHAS. CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

Vox Populi Suprema Lex.

In the folk lore of almost every people there runs a skeleton of primitive principles. These are colored by the temperament of the particular race and by conditions of climate and environment. Here and there legend has carried these primitive principles into a high plane of art, and among civilized people the exponents have been talented individuals who have produced epics, dramatic themes and even masterpieces of lyric art. Among these may be found the thread of altruism.

There is inherent in all people an element of self-protection which is expressed by law, organized government, public policy and humanitarian instincts. This goes to excuse the privileged classes when they assume the direction of public morals, and if the plummet swings at times a little wide of the meridian it is because the public itself, by its natural tendency to evade direct issues, is responsible.

The organization of communities aims at certain distinct purposes, all born in the original primitive sentiments of the people of which the same public is composed, and while the force of a community usually reaches the end of true justice, it often mis-carries through misapprehension.

As a picture is not complete without detail which only adds to its effectiveness, we have used these figures to lead up to a theme which must interest not only the intelligent purveyor of medical science, but also the layman who stops to heed the trend of public practice.

The medical profession as constituted today is the outgrowth of a demand which successive generations of human evils and ills have created, and its usefulness in large degree depends upon the

sentiment of that public. Since the days of Horace the medical man has sat among the intellectual of the land, sharing in the direction of public morals and indirectly serving the fullest purpose in interpretation of the demands made for the betterment of the public health. Whether in war or in peace, in the midst of plague, storm or peril, the physician has stood as the exponent of the highest ideals of duty. There is no law directed at sanitation, at the reduction of disease, which has not been born of a medical mind. One discovery after another has monumentalized the devotion of the physician to the art he follows and the free gift of each and all of these has shown his motive pure and high above commercial advantage.

The physician has demonstrated the way to overcome the terrors of diphtheria, the horrors of smallpox, the ravages of fevers, and they are fighting along the line against every disease which has offered resistance to investigation.

Paré finally succeeded in deriving emolument from his profession, but only after he had struggled with the prejudices of his times. Here and there stand out the names of men who have derived worldly advantage from the practice of medicine, but the laborers in this field of science have drawn as their reward the knowledge of a successful issue of their endeavor. Some men have died in the field of work, struck down by the diseases they studied.

It might need more argument to show the humanitarian interest of the medical profession, but when the voice of the public, which must always be taken through its exponent the daily press, anathematizes medical men as organized for the purpose of offending against the public by restricting their privileges it is time that we ourselves should reflect. The might of right has always won the ultimate as well as the signal victory, and, if the public is persuaded that it is hopelessly gullible and must necessarily bleed itself through the media of charlatans, preposterous fads, adulterated drugs and pretentious cure-alls, why should the guild of medicine take the trouble to interfere?

This reflection is indulged in as the result of the recent endeavor to obtain some strength and support from the Legislature of this State in protecting the public against the evils of fraud. The policy of the medical profession in this regard has been governed almost entirely by a desire to make the practice of medicine

pure and high class, and by ridding the State of quacks, frauds and charlatans this might have been accomplished. It seems as if now we must rest with the thought that our own standards are high, our profession organized for the purpose of fighting disease, giving the best service which education, research and intelligence can produce, and that the matter of public morals must be left to the intelligence of the people themselves, who, if the press of New Orleans are to be believed, prefer to indulge in vanities, make-shifts and fads, rather than rid the atmosphere of these things.

The sum total of human intelligence is constant and the law of averages is true, so we will hope that in the adjustment of the two the same public, who have been the unwilling charges of an earnest profession, may find it to their own advantage to follow the advice we give after they have experienced a sufficient injury by not doing so.

The American Medical Association at Boston.

The Boston meeting of the A. M. A. must go on record as one of the most successful in the history of the organization. The attendance was larger than that of any other meeting in its history, totaling considerably over 4,000. There were eighteen from Louisiana. The sections were well attended, many valuable papers were read and the discussions thereon were frequently excellent. The House of Delegates worked faithfully and got through their business without the amount of discussion, not to say bad feeling, that had been feared by many members, predicted by some and hoped for by its enemies.

Something was gained by the frank discussion of what many considered possible reforms and all differences were adjusted apparently to the satisfaction as well of those who had grievances as those who were commonly reputed to be of the inner circle. It was decided to appropriate the sum of \$5,000 for the physicians of San Francisco and surroundings, who were made destitute by the earthquake and fire. Another important action related to the new apportionment, as under the previous rule the number of delegates would have become larger than the Constitution allows, hence it was decided, beginning with the next session, to allow one dele-

gate for every 600 members or fraction of that figure. Louisiana's representation will remain the same, but the new arrangement will, of course, delay our getting an additional delegate. It was decided that hereafter the orators on medicine, surgery and state medicine be selected by their respective sections instead of being lectured by the House of Delegates.

At the opening session Governor Curtis Guild delivered the address of welcome, inviting the visiting physicians to inspect the various State institutions, as well as those under the control of the city, and referring to the distinguished services rendered by various surgeons of Massachusetts from the time of the Revolution up to the present. President Eliot, of Harvard University, also made an address of welcome, paying quite a tribute to the medical profession and the good done by it. Next, Dr. A. T. Cabot spoke in welcome on behalf of the Massachusetts State Medical Society, as president of the same; Mayor John F. Fitzgerald also addressed the meeting on behalf of the city of Boston, speaking about the great progress made in medicine since the previous meeting of the Association in Boston in 1865, and did not fail to impress his audience with the advantages of Boston from the sanitary standpoint, and the work of its many hospitals and medical institutions. Dr. Herbert L. Burrell made a brief report as Chairman of the Committee of Arrangements, after which the *address of the day* was delivered by the president-elect, Dr. William J. Mayo, of Rochester, N. Y. He discussed the various problems which now confront the medical profession of this country, speaking of the status of the Association and touching on most of the important subjects enlisting the attention of medical men today regarding sanitation, civil, military and naval, medical education, as well as licensing boards and the reciprocity question. The address also went into smaller details of the injustice practiced against physicians in many ways, and, all in all, was a very valuable résumé of most of the questions interesting the profession at this time. It is regrettable that the size of the hall and the noise of conversation on the part of those who were too remotely placed to hear at all interfered with a proper appreciation of the paper, even by those who were more fortunately placed. No doubt the paper will make good reading and will be worth attention when published in full.

At the evening session the oration on medicine was read by Dr. Frederick C. Shattuck, one of Boston's famed physicians, who selected as a topic "*How Progress Comes in Medicine.*" Dr. Joseph D. Bryant, of New York, delivered the address on surgery, selecting "*The Nature and Progress of Malignant Disease.*" Both of the addresses were scholarly, and were generally appreciated.

On the second day the address on State Medicine was delivered by Dr. William H. Sanders, of Montgomery, Ala. It was a valuable contribution to sanitary science.

The arrangements for the meeting were all carefully mapped out, and it was very noticeable how smoothly they worked. While the number of members in attendance was larger than ever before, and they were accompanied in many instances by members of their family, there was no undue bustle or crowding scarcely anywhere. The only detail that was somewhat criticised was the distance between some of the places dedicated to various sections or branches of the Association, rendering it difficult to do much more than attend some special department or section.

The entertainment consisted chiefly in two receptions which took place respectively the first and second evenings of the meeting, one at the public library, tendered by its trustees to the members of the Association to meet Mayor Fitzgerald. The other was at Mechanics' Hall, and was tendered by the medical men of New England to the President of the American Medical Association. It was largely attended, a feature of the occasion being some excellent selections rendered by a chorus of local physicians under the leadership of Dr. Cabot. During the first three days of the meeting an afternoon tea was tendered to the members and guests at the new Harvard Medical School, where refreshments and music were the attractions, though less so than the appearance and attention of many of the best known young ladies of Boston who served. These ladies were attired in white with crimson ribbons, etc., to represent the college colors. Attendance at the tea gave one also the opportunity of visiting this magnificent school, or, rather, aggregation of schools, for it is composed of nine distinct buildings, each of which is nearly large enough to accommodate an ordinary medical college. They are fitted up to the latest requirements, an exterior finish of marble, presenting not only a beautiful picture, but impressing one with the solidity and

magnificent resources of this department of Harvard University.

The Boston Public Library, the Art Museum, Bunker Hill and all public buildings in Boston and in the surrounding towns were open to the members of the Association, the badge being sufficient to command admission and attention both.

Many walking parties and riding parties were organized for the convenience and amusement of the members during the meeting, and many excursions to the surrounding towns of historic interest, like Salem, Plymouth, Charlestown, Concord and Lexington, were devised. The one to Plymouth was made particularly interesting from the fact that the physician in charge was Dr. Miles Standish, a descendant of the original settler of that name. All the universities, colleges and schools which abound in this section of the country kept open house during the time of meeting, and it is impossible that anyone could have attended the Boston meeting without deriving instruction as well as pleasure.

The officers selected for the ensuing year are as follows: President, Dr. Joseph D. Bryant, of New York; First Vice-President, Dr. Herbert L. Burrell, of Boston; Second Vice-President, Dr. Andrew C. Smith, of Portland, Oregon; Third Vice-President, Dr. E. S. Fairchild, of Des Moines, Ia.; Treasurer, Dr. Frank Billings, of Chicago; Secretary, Dr. George H. Simmons, of Chicago. The three trustees whose terms expire were re-elected as follows: Drs. M. L. Harris, of Chicago; W. H. Welch, of Baltimore, and Miles M. Porter, of Ft. Wayne, Ind. Atlantic City was selected as the next place of meeting, the date being left to the decision of the Board of Trustees.

We have received a copy of the address read by Dr. Edward C. Register of the *Charlotte Medical Journal*, as president of the Medical Society of North Carolina. Its subject is "*The Importance of Establishing a Higher Standard of Preliminary Education for Students of Medicine*," and was written in such manner as to appeal to the people of the State, as well as to the profession, dealing also with the relations of the society to the people of the State. The doctor was able to notice, when a member of the Board of Medical Examiners, that many of the applicants for license, while

competent professionally and technically well trained, were deficient in educational and literary qualifications. It is to correct this deficiency that the doctor urges changes in the medical laws of North Carolina.

A similar condition holds good in numerous other States, but the medical profession frequently receive such outrageous treatment at the hands of legislators when they attempt to have improvements adopted that it will probably be some time before necessary requirements can be made obligatory in all States of this Union.

Abstracts, Extracts and Miscellany.

Department of Obstetrics and Gynecology.

In Charge of DR. P. MICHINARD and DR. C. J. MILLER, of New Orleans.

THE ALEXANDER OPERATION FOR BACKWARD DISPLACEMENT OF THE UTERUS.—Dr. Chas. P. Noble (Trans. Obst. Society of Philadelphia) agrees with the majority of gynecologists that retrodisplacement of the uterus was a morbid condition, and that in most patients who consulted the physician it was the cause of symptoms *per se* and a predisposing cause of congestion of the uterus, of hypertrophy of the glandular structure of the endometrium with resulting leucorrhea, and of prolapse and congestion of the ovaries, and that in a certain percentage of cases, without any specific infection of the vagina or endometrium, the uterus and ovaries became adherent. These remarks applied to non-puerperal cases. Uncomplicated retroversion in the puerperium led to subinvolution of the uterus, and to post-puerperal hemorrhages and leucorrheal discharges. Therefore, he argued, so-called uncomplicated retrodisplacements of the uterus should be cured, not only to relieve the symptoms which existed, but to prevent ensuing complications. The Alexander operation he regarded as the operation of election in nulliparous patients, especially in unmarried women. In such

patients the pessary would not keep the uterus in position, and in many cases did positive harm. In other cases it would keep the patient comfortable as long as it was worn, but as a result the patient was tied to the physician's office. In puerperal cases the tampon to promote involution, followed by the Smith-Hodges pessary, would probably cure one-third of the cases. In married women of the child-bearing age, when the pessary keeps the uterus in position and the patient comfortable, its use was rational and preferable to an operation. In all other uncomplicated cases the Alexander operation should be performed. He had performed this operation about two hundred times. A study of ninety-five cases showed the following results: Anatomical failures, 1; anatomical cures, 94; symptomatic cures, 75; partial symptomatic cures, 12; symptomatic failures, 7; number of pregnancies, 39; complications during labor, 0; miscarriages, 9 (one patient having had 3).

In its proper field the Alexander operation was the ideal one. The operation was never done in the presence of a history of infection and peritonitis, nor unless examination under anesthesia showed the uterus to be freely movable and the adnexa without palpable disease. When these conditions were not met with the Alexander operation was rejected and the abdomen opened.

THE OPERATIVE TREATMENT OF INTRA-CRANIAL HEMORRHAGES IN THE NEW-BORN. (Editorial, *British Jour. of Children's Diseases*.)—In this interesting editorial is discussed the possibility of treating intra-cranial hemorrhages of the newly-born by surgical measures.

The diagnosis is made by (1) the history of the labor and especially postpartum asphyxiation; (2) a tense and probably non-pulsatile fontanelle; (3) convulsions appearing a few days after birth; (4) undue reflex activity; (5) ocular palsies or difference in the size of the pupils.

Confirmatory evidence can be obtained by lumbar puncture from the presence of blood cells in the meningeal fluid. Howell Evans, in a communication to the Society for the Study of Diseases of Children, January, 1904, pointed out that these hemorrhages are due to rupture of blood vessels passing through the parietal bone from the scalp to the interior of the skull, via the sagittal fontanelle, the inter-parietal suture, or the parietal foramen, by the overriding of the bones during labor. Rupture of these vessels

produces either a cephalhematoma externa or interna, with intradural hemorrhage. According to Evans, hemorrhage takes place during the reactionary period after birth, reaching its maximum on the third day.

The importance of this subject is manifest when one regards the frequency with which idiocy, imbecility and epilepsy follow these injuries, and there can be no doubt that in the future there will be an increasing disposition to subject such cases to surgical measures.—*Jour. Obst. and Gynec., British Emp.*, April, 1906.

EMBOLISM FOLLOWING ABDOMINAL SECTION.—Dr. Wilmer Krusen states that according to Dearborn, reviewing the work of twenty-five surgeons, thrombosis and embolism were more common after operations in the pelvis than after operations in any other part of the body. In a résumé of 7,130 gynecological operations, Schenck reports forty-eight cases of thrombosis. Dr. Krusen reported five cases, four of which ended fatally, occurring in twelve years of gynecological practice. The symptoms in the fatal cases were similar. The attack was characterized by precordial distress, severe pain and dyspnea, with quickened pulse, anxious expression of the patient, who gasped for breath with the aid of all the auxiliary respiratory muscles. The face was cyanosed, with the occurrence of cold, clammy sweat. As a rule, the mind remained clear. Death occurred in a few minutes in spite of energetic stimulation. The fifth case reported manifested the same symptoms, but recovered. Dr. Krusen referred to Mahler, who, aside from the clinical symptoms, laid great stress upon the persistent frequency of the pulse rate out of proportion to the temperature elevation, and quoted Kelly, who says "that the fact that these cases occur teaches anew the important lesson that the surgeon is never warranted in guaranteeing the recovery of the patient even after a seemingly simple operation. Patients whose vitality is depressed and those who are anemic should be watched with special solicitude." Dr. Krusen believes it probably possible by a careful study of the blood before operation, the avoidance of excessive loss of blood during the procedure, and the use of saline infusions after the procedure to diminish the number of such cases. In anemic cases a longer rest in the absolutely recumbent position, with the avoidance of all exertion or straining for a longer period than is customary, was advised.—*Trans. Phil. Obst. Society.*

LUMBAR PUNCTURE AND VERATRUM VIRIDE IN ECLAMPSIA.—F. Mirto (*Ann. di Ostet. e Gin.*) has examined the 16 cases of eclampsia reported by Henkel, in which lumbar puncture was performed to relieve the supposed increase of tension of the cerebro-spinal fluid, and shows that the increase in fluid is not present in all cases, the canal being found empty in some. He believes that increase in the amount of the cerebro-spinal fluid is not of much influence in the production of eclampsia. At the same time the treatment was not markedly successful. The author recommends the use of veratrum viride for reducing the pressure of the blood in such cases, using hypodermic injections of an extract of the drug. He observes that as often as the blood pressure rises an attack of convulsions may be feared. The reduction of the arterial pressure by veratrum is successful in warding off the attack in many cases; in some it prevents the repetition of attacks, and in some it has succeeded in permitting the pregnancy to go on to term and the child to be delivered normally. He cites 61 cases in which it was used in this way in the obstetric clinics at Pavia and Milan, with only six deaths. It was used as a preventive in many other cases with high tension and albumin and casts in the urine, in whom no deaths of eclampsia developed. Although the increase of pressure may not be the cause of the convulsions, it is the invariable accompaniment of them and is an index of the probable appearance of the seizures.—*Amer. Jour. of Obst.*

Department of Internal Medicine.

In Charge of DR. E. M. DUPAQUIER, New Orleans.

APPREHENSION.—Mrs. M., 51, is seen August 9, 1905. She has been in bed since July 4, suffering from a "complication of diseases," and her medical attendant has been changed several times. She had nervous prostration fourteen years ago, and has never been well since, but except for children's diseases she has had no other definite illness. She has had eight children—the last six

years ago—and, until recently, has done most of the housework for the family.

Her present illness began July 4 with diarrhea, vomiting, fever, and sweating. These symptoms passed off in about three weeks, but there have been suggestions of a return of them several times, and she has not regained her full strength. Insomnia is a very troublesome symptom, and in the long, wakeful hours she sometimes has spells of “weakness,” for which aromatic spirits of ammonia is taken with some relief. There are also “smothering spells,” when she feels as if she must get up and walk, and is restrained only by the strict orders of her physician.

She has never been a hearty eater, but the appetite is now very fair. There is no pain and the bowels move with the aid of laxatives.

Examination showed a stout, pale woman, with a temperature of 99°. The size of the heart could not be exactly determined on account of fat, but the sounds were normal, and were loudest in their normal sites. The peripheral arteries were normal. At the beginning of the examination fine crackles were heard at the base of each axilla, but they disappeared after a few deep breaths and were not heard again. Liver dullness begins at the seventh rib, and the edge can be felt below the ribs. Otherwise visceral examination is negative. Hemoglobin 99%. Urine normal.

Diagnosis? Prognosis? Treatment?

Diagnosis: A feverish gastro-enteritis five weeks ago; now, weakness, insomnia and smothering spells, with a desire to move about—such are the main complaints. In a woman of 51 these symptoms suggest arterio-sclerosis or myocarditis, but the physical examination gives no support to these diagnoses, and without physical signs one cannot make them.

The crackles in the lungs would have been significant had they persisted, but *transient* crackles at the base of the axilla have no pathological significance. The liver is low—both the upper and the lower border—but shows no evidence of enlargement, and simple ptosis, whether of the liver or of all the abdominal organs, is not likely to explain the symptoms of this case. The main question is: Has the woman any disease at all? Are not her weakness and insomnia the result of staying in bed? This diagnosis was in fact

verified by the results of getting up and to work. In a few weeks the woman was perfectly well.

Prognosis and Treatment: The reassurance that one can give after convincing himself by a thorough examination that the organs are sound is the most important medicine for such a case. The stimulus of work and exercise, with the increased appetite and sleep resulting, will usually complete the cure. (RICHARD C. CABOT, A. B., M. D. (Harvard).—"Case Teaching in Medicine.")

WHOOPING-COUGH.—The treatment is that of the infection. The remedies are legion and cannot be reviewed in this connection. In many cases, sedatives, particularly the bromides, and various inhalants exert a beneficial influence. Personal experience with the old quinin and belladonna treatment, the latter pushed to its physiologic limit, has led me to continue its use. Better than medicine, however, is outdoor life during the daytime, in the country or at the seashore if possible, and open windows at night. The bronchitis must be treated with as much care as in a primary case affecting the smaller tubes. (James M. French, M. D. "Coughing and Its Relation to Treatment." *Internat. Clinics*, Vol. 1, Sixteenth Series.)

Miscellaneous.

Immunization Against Malignant Growths.

(EHRlich, P. *Experimentelle Karzinomstudien an Mäusen: Zeithschr f. arztl. Fortbildung* 3, 1906, No. 7.)

At last after all these years of intense study of the cancer problem we are able to chronicle the advance which, all must hope, heralds eventual victory. Much, it is true, remains still to be accomplished, but no one acquainted with modern methods, cytolytic and hemolytic, and their results, after reading this paper can be otherwise than convinced that Ehrlich has laid the foundations for a successful preventive treatment of cancer, and that, along the same lines, cure of this dread disease, at least in its early

stages, is only a matter of time. Many as are the debts which medical science owes to Ehrlich, from his studies upon the chemistry of the cell in relation to staining, and establishment of histological methods upon a sure foundation, through his recognition and classification of the different forms of leucocytes and methods of standardizing antitoxins, to the establishment of the side chain theory of immunity, with the marvelous impetus this has given to investigation, these last studies impress us as the greatest of all. Briefly Ehrlich has now clearly established a method of immunizing against malignant growths in the animals of the laboratory, and that by a natural evolution and application of the principles which have dominated all his previous work. His results are the logical outcome of his studies upon the nature of metabolism and of the side chain theory. There remains now to apply this method to the human being, and to expand it to the arrest of the disease when it has already shown itself, and, by analogy, this is possible. We heard rumor, indeed, in December that certain workers in New York imbued with the same ideas had already achieved a definite measure of success in the treatment of malignant disease. If so, theirs will be the great service and the honor of definitely solving the cancer problem: but the results have still to be published. And in the meantime the experimental basis of the method has been established by Ehrlich.

In the lecture before us, Ehrlich details the stages that have led him to his results. It was evident, judging from bacteriological experience, that only by animal research, by the study of the mode of growth and properties of malignant disease in the lowest animals, could sure results be obtained, for, in this way, in the laboratory disturbing factors could be largely eliminated, and of animals, as demonstrated by Hanau, Moran, Leo Loeb, Jensen, as again by Borrel and Michaelis, mice, and to a less extent rats, offered the best material for study, for in them the growth can be transplanted from generation to generation. The British Committee, it will be recalled, are working upon exactly the same basis.

But affected rodents are not easy to obtain. Out of 30,000 mice Bashford only gained 12 with tumors, and for a year Ehrlich could not encounter a single case. Eventually, however, during the last year no less than 230 individual cases have been received at

the Frankfurt laboratory, an amount far in excess of that at the service of all other investigators combined. It is interesting to note that all the primary developments are in the female mice, and originate in the mammary gland. Of these 230 tumors the majority were of the non-malignant adenomatous type, the minority of carcinomatous nature. And what is more, only a small proportion yield positive results on implantation: of 94 implanted, only 11 gave new growths, and that in by no means all the animals inoculated. If from one primary tumor, according to its size, 20 to 30 other mice were inoculated, it might be that only one or two, rarely six or seven, gave results.

But once such transplanted material showed growth it was possible in a certain number of cases, by successive transplantations through a series of mice, to gain a most remarkable augmentation of virulence, and here was Ehrlich's first important step forward, in this establishment of increased virulence by passage, so that he gained a "virus" of assured activity. Eventually, with such material, the positive results were close upon 100 per cent., the growth became rapid, so that in 10 days he could remove and transplant; the extraordinary mass thus at his disposal may be realized when one mouse in eight days afforded cancer tissue sufficient for the development of tumors in 10 other mice, and these in turn were used to set up cancer each in 10 to 15 more mice. In short Ehrlich has already been able to transplant one tumor through 70 generations.

A remarkable side issue has been noted in these cases, namely, the appearance of sarcoma, which in one series of transplantations completely overgrew the original cancer, forming a pure spindle-cell sarcoma. We have seen the specimens, and no one can doubt their nature; the second transplantations still remain mixed, with polymorph cells and indications of epithelial elements; in a third there is definite combination of carcinomatous acini with sarcoma elements. The only explanation so far possible is that in these cases the stroma (provided by the host) in one of the series of animals inoculated has taken on malignant growth, and these secondary malignant cells are capable of continued growth.

It is evident, however, from Professor Ehrlich's figures that there is a very considerable natural resistance of the mouse at all ages to what we term natural carcinoma—to first transplantation. Of the last 21 tumors obtained out of 282 mice inoculated, only two

gave positive results, whereas the results were positive with his material of augmented virulence, whether he employed old mice or young, male or female.

We constantly encounter like phenomena with bacteria. Leaving aside the question of primary origin of cancer cells, what are the conditions which favor proliferation? In the first place it is established that tumors are only capable of transplantation into the same or a closely allied species. Thus Ehrlich was able to inoculate rats successfully with his augmented material from the mouse. Here, however, differences show themselves: the cancer only grew for a week or so and then underwent absorption. If replanted into a mouse at the end of the week it again gave positive results, into a rat negative. Just as a smear of hemorrhagic sputum upon plain agar will give results of the influenza bacillus, but further transfers upon like medium are negative, the bacillus only growing where blood is added, so, according to Ehrlich, it is with these cancer cells: the growth in the rat is due to food material brought with them. Indeed only the outer cells of the inoculated mass grow, the more internal from the first show evidence of necrosis. It is not that the rat's organism contains primarily an antibody, merely that some specific food material is absent.

While this appears to be established, an antibody is developed in the rat by the presence and absorption of the mouse cancer. Inoculate a rat a second time with the same tumor material, and from the first all the cells show not a sign of growth, but on the contrary a necrosis. Here we have the first indication of the possibility of gaining immunity.

A similar order of immunity is to be noted in the mouse. It is not a little remarkable in these cases that, where the primary growth shows such enormous and rapid development, metastatic growths are rare, or, if present, small and inconsiderable. So, also, *if a second inoculation of the same order of tumor material be made into a mouse, this second tumor does not develop*. Ehrlich ascribes this to a like using up of the specific nutritive matter by the very active primary growth. We confess we doubt the validity of the explanation. To us the conditions appear to be parallel with those we notice in syphilis and in tuberculosis, and, as there, so here, are best explained by a coincident exaltation of resisting powers and

development of antibodies by the tissues away from the growth and not directly involved. (*Vide* Adami: "Adaptation and Tuberculosis," *British Medical Journal*, April 29, 1905.)

Ehrlich would explain the active growth of the tumor cells at the beginning as due to the avidity of the cancer cells for certain food stuffs with coincident lowered assimilative capacity of the other cells of the organism for the same. Later, very much along the lines of our theory of the habit of growth, he recognizes that there is an increase of avidity and assimilative power to a maximum. If, he suggests, we can find a means of increasing the avidity of the rest of the tissues for these specific food stuffs of the cancer cells, and thereby withdraw their source of nutrition, then it will be possible to arrest the growth of cancer.

Now already there are, along with many negatives, certain positive results upon record regarding immunization against cancer. Thus, notably, Jensen inoculating mice with dead cancer material saw that small tumors obtained through inoculation underwent atrophy and resorption, and Clowes has noted that mice whose tumors underwent spontaneous resorption afforded an anti-cancerous serum. But the results have not been constant. Ehrlich attributes this to the fact that observers have not been dealing with tumor material of maximal virulence. As Pasteur in the case of bacterial immunity, so in this matter of cancer, Ehrlich emphasizes the fact that no constant results can be obtained until toxic material of maximum virulence has been gained. Such material of maximal virulence he now possesses, able when inoculated to cause cancer in close upon 100 per cent. of the cases. His important announcement is that mice inoculated with non-virulent material—with tumor matter that is, which underwent absorption and not growth, and it will be recalled that the majority of his animals used for primary inoculation come under this category—are in the majority of cases completely immune to subsequent inoculation of material of maximum virulence, and in all cases a powerful immunizing or retarding effect is observable. He employed animals already in the laboratory at various periods after primary inoculation, and has no doubt that subsequent, more precise treatment will afford perfect results.

The immunity shows itself rapidly—in from seven to fourteen days after the primary inoculation, and is maintained for weeks

and months. He has obtained it repeatedly, "*immer und immer*," during the last year, and with him we must regard the result as "*ausserordentlich erfreuliches*." He has obtained his most perfect results with mice which did not react with the first inoculation, and the cancer tissues from which originated eventually his virulent material.

What is important is that he found that one mouse cancer immunized against all other mouse cancers, and, what is more, against mouse sarcoma. The reaction, thus, is not narrowly specific, though evidently from the statement just received, just as we note in bacteriolysis and cytolysis, the most powerful result is obtained against the particular strain affording the immunizing material. To a moderate extent the animals so immunized were also protected against a mouse chondroma of extreme local malignancy or active growth which Ehrlich is transplanting through a series of animals. Ehrlich correlates this with the frequent presence in the same individual forms of tumor to which Albrecht of Munich has called attention, and in Montreal has been emphasized by Nicholls and Woolley. We shall not, however, discuss the subject, interesting as it is, nor yet the explanation of those facts in the terms of the side chain theory, which here gains further corroboration. The all-important point is that active immunity against cancer is shown not merely to be possible but to be gained with precision by a specific method of procedure, and that against cancer of maximum virulence. The application of these results in human medicine can only be a matter of time. We see the dawn.—J. G. ADAMI, Editorial, *Montreal Medical Journal* for June, 1906.

Louisiana State Medical Society Notes.

In Charge of DR. P. L. THIBAUT, Secretary, 141 Elk Place.

NEXT MEETING: NEW ORLEANS, MAY 14, 15, 16, 1907.

OFFICERS—President, Dr. Henry Dickson Bruns, New Orleans; First Vice-President, Dr. Charles McVea, Baton Rouge; Second Vice-President, Dr. George F. Wilson, Bienville; Third Vice-President, Dr. A. J. Perkins, Lake Charles; Secretary, Dr. P. L. Thibaut, New Orleans; Treasurer, Dr. Jules Lazard, 830 Canal Street, New Orleans.

COUNCILLORS—Chairman, Dr. E. J. Graner, 2d Cong. Dist., New Orleans; Secretary, Dr. J. L. Scales, 4th Cong. Dist., Alden Bridge, La.; Dr. P. E. Archinard, 1st Cong. Dist., New Orleans; Dr. J. Wofford Sanders, 3d Cong. Dist., New Iberia, La.; Dr. S. L. White, 5th Cong. Dist., Ruston, La.; Dr. C. M. Sitman, 6th Cong. Dist., Greensburg, La.; Dr. C. A. Gardiner, 7th Cong. Dist., Sunset, La.

FIRST DAY, MAY 8, 1906.

MORNING SESSION.

Meeting called to order by the President, DR. C. J. DUCOTE.

Invocation was delivered by BISHOP DAVIS SESSUMS.

The

ADDRESS OF WELCOME

was delivered by DR. C. JEFF MILLER, President of the Orleans Parish Medical Society, as follows:

Mr. President and Members of the Louisiana State Medical Society:

It is my pleasant duty to officially tender you the greetings and hospitalities of the Orleans Parish Medical Society. In the beginning let me say, at once, that we welcome you as friends—friends by the ties of personal regard—and as collaborators in the field of usefulness in which we are all laboring.

If our annual meeting had no other purpose than the meeting and mingling with each other; if it accomplished little more than the opportunities for social intercourse and the interchange of personal courtesies, and the cementing of old friendships, its work would be invaluable. It would allow us to pause for the time being, to step aside from the toil of professional pursuits and struggles of an overcrowded life and enjoy those little amenities that lend to life its most cherished charms. We have other work to engage our interest, however. In the marvelous progress of medicine and the allied sciences which are to be discussed, the wide

range of discovery and research is ever stretching its horizon, enlarging its detail and making the frequent consultation of professional men more important from day to day. It has become necessary to have an annual stock taking, to combine our resources and compare our results in order to develop that combined accuracy and extent of knowledge so necessary in dealing with the multiform phases of disease.

The specialist must render an accounting to the general practitioner in order that he may be guided in his future work. The general practitioner must acquaint the specialist with the borderland diseases, must never let the man dealing with one disease or region of the body become contracted and lose sight of the fact that the body after all is influenced by every organ it contains. As time has passed the physician has become a semi-public official. This has come about through the growing interest of the public in the subject of the prevention of disease and the realization that one man living a clean, wholesome life accomplishes little unless his community lives likewise. Out of this has come the study of sanitation and the first exponents of the sanitary laws are the physicians. They have shouldered these responsibilities readily and have gradually received the assistance and encouragement of an intelligent public until the prophylaxis of disease has become almost as well understood out of the profession as in it. Coming as you do from every parish of Louisiana, viewing public matters from various points of vantage, and every one of you having practical experience in the questions proposed for discussion, no one can doubt that much good is to come from this meeting. Let us hope that every member will add his contribution to our common fund of facts from which our laws of disease and the weapons by which it is to be overcome are moulded.

The profession of New Orleans has other reasons for giving a hearty welcome to the Louisiana State Medical Society. Chief among these is the work that has been accomplished in organizing the profession throughout the State and the untiring efforts of your officers to have the individual members know each other better and labor for the common good of the profession. We should feel especially proud of the fact that this has been accomplished by the Louisiana State Medical Society and not by missionaries from

our national association. Strong organization means greater confidence in ourselves; it means greater respect from the laity, and in the end means the greatest good for the greatest number. The Orleans Parish Medical Society congratulates you for what you have accomplished and hopes you can keep up this strength and vigor by adding every new force within the State.

Gentlemen, one and all, in the name of the profession, I bid you an earnest and cordial welcome.

The roll call was dispensed with.

Reading of minutes was dispensed with.

The PRESIDENT, DR. C. J. DUCOTE, delivered his report:

ANNUAL REPORT OF THE PRESIDENT.

To the Officers and Members of the Louisiana State Medical Society:

When this society adjourned a year ago it did not occur to the most pessimistic among us that, within sixty days, this city and State would be visited by an epidemic of yellow fever, which, at first, promised to be most disastrous.

The medical profession of New Orleans, and, I might say, of the whole State, rose as one man to do battle to the scourge.

The people readily accepted the mosquito doctrine and contributed in no small degree to the eradication of the disease.

With the aid and co-operation of the United States Public Health and Marine Hospital Service, under the wise and scientific management of Dr. White, the fever was stamped out before the advent of frost, something never before anticipated by the most pronounced optimist.

At one time the officers and a number of the members of this society thought it advisable to call a special meeting to prepare for sanitary measures and urge necessary changes in medical legislation.

I, accordingly, under date of November 29, issued a call for a special meeting to be held in this city on February 6, 7 and 8.

Subsequent events changed conditions so much that it became evident to some of us that the special meeting would not accomplish the objects which it was intended it should, and for that reason the call was canceled.

A vacancy was created in the Council last March, when Dr. N. K. Vance of Shreveport, Councillor of the Fourth District, accepted an appointment under the United States Public Health and Marine Hospital Service to Puerto Cortez. At the Doctor's suggestion and recommendation I appointed Dr. John L. Scales of Walden Bridge, Bossier Parish, to be his successor. A second vacancy was created in the Council by the removal of Dr. R. F. Harrell from Ruston to Alexandria. The Doctor, having compiled a report of the work done in his district, has kindly consented to continue his duties until after his report shall have been read. At his suggestion and recommendation I appointed Dr. S. L. White of Ruston to be his successor. His duties will begin after Dr. Harrell shall have read his report.

In the matter of the fee of Mr. E. T. Florance, attorney, for drawing the "Medical Practice Act," complying with a resolution adopted at our last annual meeting, the secretary was instructed to make to him a tender of \$50. Mr. Florance replied that he would not accept a fee less than the one originally charged by him. He said the formal tender of \$50 was unnecessary, as he had no intention to attempt to enforce the payment of his bill. He said he preferred considering the work to have been done gratuitously. The society refused to pay to Mr. Florance \$100 and he refused to accept \$50, and thus the incident was closed as far as my administration is concerned.

Referring to that part of Section 1, Chapter V, of our By-Laws, which defines the duties of the president and says, "as far as practicable he shall visit by appointment the various sections of the State and assist Councillors in building up Parish Societies and in making their work more practical and useful," I wish to say that during the entire term of my office I was very desirous of fulfilling the duties enumerated above, but circumstances over which I had no control prevented me from doing so. However, by correspondence with the Councillors, the Secretary and the Chairman of the Committee on Arrangements, I kept in close touch with all matters relating to our society, and I take this means to thank them for uniform courtesies.

The First Vice-President, DR. J. F. OECHSNER, made a short report.

The Second Vice-President was not present, and there was no report from him.

The Third Vice-President was not present, and there was no report from him.

DR. P. L. THIBAUT, Secretary, read the following:

ANNUAL REPORT OF SECRETARY.

NEW ORLEANS, May 8, 1906.

To the Officers and Members of the Louisiana State Medical Society:

Gentlemen—In submitting this report to you I shall not attempt to go into the minutiae of the work done during the year, as these have been published from month to month in our official organ, the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL, under the heading of "Louisiana State Medical Society Notes." I shall, however, in a few words, endeavor to give the points of special interest to the members of this Society. At our last annual meeting we reported 47 parishes organized into 44 parish societies. Of the 44 parish societies only 41 paid dues for 1905. At this present date we have 43 parishes organized into 40 parish societies, of which only 3 have failed to pay 1906 dues. These last I do not doubt will not allow their names to be erased from the roster of the Society. Of the remaining 16 parishes in the State, 6 (Calcasieu, Iberia, Lafayette, Sabine, St. Mary and Terrebonne) have at one time been organized, but on account of the apathy of the members have become defunct. Three parishes (Madison, St. Martin and Washington) have never been organized, but should be, as they have a sufficient number of physicians for organization. The remaining 7 (Cameron, East Carroll, Jefferson, Livingston, St. Bernard, St. Helena and West Carroll) cannot go into permanent organization for the simple reason that there are not enough eligible physicians within their boundaries.

We believe that the value of organization is being more generally appreciated by the profession throughout the State, and we would therefore respectfully urge the Executive Committee to exert all their efforts in bringing into line those parishes in which organization is possible.

We have found our card index and vertical file systems satisfactory and have made no change therein. In compiling our data concerning the status of the profession throughout the State we have drawn our information from the reports of our Councillors, reports of the State Board of Health, reports of parish society secretaries and other sources. As we fully appreciate how little time the country physician can spare from his daily duties we have tried to simplify the correspondence work of the parish secretaries by supplying them with cards on which all matter is printed except such as must necessarily be furnished by them. This method has met with favor and has helped us to materially increase our stock of information.

The system of vouchers and stubs has not been changed. This, with other financial details, has been submitted to the expert accountant of the Society.

The Transactions for 1905 have been published in the official organ of the Society, the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL. We wish to thank the editors of the JOURNAL, Drs. Chassaignac and Dyer, for their co-operation.

I desire to thank the President for his staunch support and most kind advice.

The Chairman of the Committee on Arrangement, Dr. M. J. Magruder, has been tireless in his endeavor to make this meeting a success. I think we will all agree that his efforts have been successful.

Mr. George Augustin, the Assistant Secretary, has been a hard and willing worker, and I wish to thank him.

In conclusion, I wish also to thank the officers and members of the Society, whose many courtesies and earnest co-operation have helped to make my task a pleasant one. Respectfully submitted,

P. L. THIBAUT, M. D., *Secretary*.

DR. M. H. MCGUIRE requested further time in which to formulate the Treasurer's report, which was granted.

A motion was made that the reports read be adopted, which carried.

DR. E. J. GRANER, Chairman of the Council, read the following report:

REPORT OF CHAIRMAN OF COUNCIL.

To the President and Members of the Louisiana State Medical Society:

Gentlemen—As Chairman of the Council I have the honor to submit the following as our annual report:

The State of Louisiana is divided into 59 parishes and 43 of these parishes are organized as component parts of our State Society. Some of the parishes, joining with others, make bi-parish organizations, which give us 40 medical societies throughout the State.

The following parishes are not organized, 16 in number: Calcasieu, Sabine, Iberia, Lafayette, St. Mary, Terrebonne, Madison, St. Martin, Washington, Cameron, East and West Carroll, Jefferson, St. Bernard, Livingston, St. Helena.

We have in the State 1,884 registered physicians, making an approximate, as to population, of one physician to about every 800 inhabitants. This is of course only an approximation, made after a careful consideration of the subject.

We have a membership throughout the State of 910 physicians.

The Parishes of Jackson and Union were organized during the year; the Parish of Acadia was reinstated.

Immediately after our session of last year I mapped out a line of work and campaign to pursue in the undertaking of trying to help pass the act to amend and re-enact the medical laws regulating the practice of medicine, surgery and midwifery in the State of Louisiana.

My plan was first to get an official roll of the General Assembly, then divide the list into the seven Congressional Districts, one list for each Councillor, which lists were sent to each Councillor.

I then had the amended act printed in a convenient form with large type so as to be easily read. I delayed sending out my letters and copies of the act, for the reason that I did not want the doctors to forget how important this business was and I wanted the subject fresh in their mind for the meeting of the Legislature, as well as for the medical meeting.

After I received many letters from the members acknowledging my printed matter and promises that they had received from Senators and Representatives that they would support the measure, I

then wrote a personal letter to each member of the Legislature, inclosing a copy of the act, and I must say that I have been well rewarded for the trouble by the answers that I have received. I have seen personally several city members who will help us in our fight.

It is possible now after what work I have done in this direction to tell you in all sincerity that if we want to be successful in this attempt to pass this law, we will have to work—work much harder than ever before—for I know positively that there will be opposition and we will be compelled to have a strong delegation at Baton Rouge.

I want to take this opportunity to thank the members who were interested in the work and who took the trouble to see their Representatives on their return home.

REPORT FOR FIRST CONGRESSIONAL DISTRICT.

To the President and Members of the Louisiana State Medical Society:

Gentlemen—As Councillor from the First Congressional District, I beg to report that the district is composed of two parishes and a part of Orleans. The two parishes are St. Bernard and Plaquemines. The latter is organized and in a flourishing condition, but the former is not organized, because there are only two physicians within its borders. That part of my report regarding Orleans Parish is embodied in the report of the Councillor from the Second Congressional District. Respectfully submitted,

P. E. ARCHINARD,

Councillor from First Congressional District.

REPORT FOR SECOND CONGRESSIONAL DISTRICT.

To the President and Members of the Louisiana State Medical Society:

As Councillor for the Second Congressional District I beg to report the following, showing the organization and condition of the profession in the district:

The Second Congressional District comprises the Parishes of

Jefferson, St. Charles, St. John, St. James and part of Orleans, from Julia Street to upper city limits.

The following component societies are organized in the district: St. James Parish Medical Society, which has a membership of 17 physicians; St. John-St. Charles Bi-Parish Medical Society, with a membership of 10 physicians.

Orleans Parish Medical Society, which includes the whole of Orleans Parish, has a membership of 251 physicians, leaving about 50 qualified and registered physicians who are eligible to membership that are not members of the Society in the City of New Orleans.

The following table shows the number of physicians practicing in the parishes comprising the district:

	Orleans	Jefferson	St. Charles	St. John	St. James
Regulars	598	5	3	10	17
Homeopaths	8	1	..	..	..
Female	8	..	..	..	..
No diplomas	31	..	..	..	..
Osteopaths	5	..	..	..	..
Colored	10	..	..	..	..
<hr/>					
Total registered...	660	6	3	10	17

Making a total of 686 white and 10 colored, making a grand total of 696 registered physicians in the Second Congressional District.

Jefferson Parish is not organized; two of the physicians that are registered there are members of the Orleans Parish Society, one is a member of the State Society and the other two refuse to join any organization, State or parish. I have made personal attempts to convince these two gentlemen of the advantages gained by being members of our Society, but have failed to accomplish anything.

The three component societies in the district are in a very flourishing condition. There is no question about the fact that organization has done good for the profession. In Orleans Parish we see the good results. We have brought together the doctors and made them feel at home in our meeting house, a place where the large library of some 6,000 books is always at their disposal. Organization has made us know each other and taught us a fellowship that

ought to exist amongst men even if they are not following our noble calling. Respectfully submitted,

E. J. GRANER,
Councillor Second Congressional District.

REPORT FOR THIRD CONGRESSIONAL DISTRICT.

LAFAYETTE, LA., May 7, 1906.

To the President and Members of the Louisiana State Medical Society:

Gentlemen—I feel that the rendering of my account of the work accomplished in the Third Congressional District during the past year will prove rather disappointing. At the beginning there seemed to be good ground for the hope of a successful campaign of organization. Unfortunately, my plans were delayed by the disastrous visitation of last summer and its hideous handmaid, quarantine; and subsequently my removal from Lafourche to Lafayette did away with the last opportunity I had of visiting my district.

The three parishes of Lafayette, St. Martin and St. Mary were unorganized when I entered upon my duties as Councillor. I knew little of conditions in St. Mary; from information received, I incline to the belief that a majority of the profession in that parish favor organization. In St. Martin also the profession seems to be very favorably disposed. There remains one other parish to account for, Lafayette. I have to report that, after two unsuccessful attempts, a third call was made, which resulted in a local society composed of twelve members so far. We expect a large increase in membership. The secretary of this society will take the necessary steps at once to incorporate it into the State Society.

In regard to the proposed amendment to the medical law, I have sent to each member of the Senate and House of Representatives in my district a copy of the act and with a personal letter soliciting their assistance.

In conclusion, I have to say that the desired organization throughout the parishes will be of solid duration only if a thorough obedience to the A. M. A. Code of Ethics is enjoined upon all members of the local and State organizations. The great stumbling block is the want of agreement upon a fair and uniform schedule

of prices for medical services, and a satisfactory adjustment of this disturbing element is absolutely necessary. Respectfully submitted,

H. L. DUCROCQ, M. D.

REPORT FOR FOURTH CONGRESSIONAL DISTRICT.

Dr. E. J. Graner, Chairman of the Council:

Having been appointed Councillor on March 14, to fill out the unexpired term of Dr. N. K. Vance, resigned, the opportunity for the exercise of any official activity on my part has naturally been limited.

My energies have been directed toward creating a sentiment favorable to the new medical practice act to be submitted to the next Legislature, and to that end I have either interviewed in person, or approached by letter, every Senator and Representative in the Fourth District, except such as I knew to have already committed themselves in favor thereof. Some of them have frankly stated that they would support the measure. I have also addressed a letter to every officer of a competent medical society within the district, urging the physicians so addressed, as individuals and as members of societies, to work for the bill.

From what I have been able to gather I am inclined to believe that the act will receive the support of a large majority of the Legislators from the parishes comprising the Fourth District. I believe that the parishes are well organized, the societies doing good work, and the ethical standards high and well-preserved.

Respectfully submitted,

JNO L. SCALES,

Councillor Fourth Congressional District.

REPORT FROM FIFTH CONGRESSIONAL DISTRICT.

Mr. President and Gentlemen of the Louisiana State Medical Society:

Your Councillor from the Fifth District begs leave to submit the following report: I would like to say before going into details of

this report that I have been very much hindered in my work during the past year, first by the quarantine last summer and fall, which operated in keeping me out of the territory in greatest need of organization; and during the past spring months I have been engaged in a change of location, hence, my time for work has been somewhat limited.

Since the last meeting of the State Medical Society there have been two charters issued to parish organizations, viz.: Union and Jackson. There remain in the district three parishes unorganized, namely: East Carroll, Madison and West Carroll. I had about effected arrangements to organize East Carroll last July when yellow fever broke out, and the whole of that section was quarantined. The physicians in Madison and West Carroll Parishes being so few in numbers and widely scattered, it was thought best not to undertake an organization in those parishes, but it was my intention, had I been able to visit them, to have Madison to unite with East Carroll, and West Carroll to unite with Richland in their organizations. I have distributed copies of the proposed medical bill throughout my district, mailing a copy, with a personal letter, to every Senator and Representative in the Fifth District.

It is with deep regret that we have to chronicle the death of Dr. A. W. Jones, of Morehouse Parish, which sad event occurred at Plantersville, March 16, 1906. Dr. Jones was a graduate of the Tulane University of Louisiana, of the Class of 1883. He was a man of sterling qualities, commanding the respect of all who knew him, both as a physician and gentleman.

It is also our painful duty to record the death of Dr. Chas. W. Hilton, who was also a graduate of the Medical Department of Tulane University of the Class of 1887. Dr. Hilton practiced his profession in the beautiful city of Monroe, and was classed among the best physicians of that whole section. He will be sadly missed by his many friends, and especially by the members of the profession.

The statistical report which I append is as nearly correct as could be obtained under the circumstances, and is as follows:

PARISHES.	PHYS. REG.	PHYS. NOT REG.	MEMBERS OF PARISH ORGANIZATION.	REMARKS,
Caldwell	10	None.	7	
Catahoula	13	1	4	
Claiborne	19	5	14	1 reg. under old law.
Concordia				
Franklin	12	3	12	1 reg. under old law.
Jackson	15	2	8	
Lincoln	23	6	11	
Morehouse	20	None.	13	
Ouachita				
Richland	13	None.	7	1 reg. under old law.
Tensas	13	None.	9	
Union	19	9	11	
Parishes Unorganized.				
East Carroll	7	None.	None.	
Madison	7	None.	None.	
West Carroll	3		1	

As I have removed from the Fifth District and taken up my residence in Alexandria, I respectfully offer my resignation.

R. F. HARRELL.

REPORT FOR SIXTH CONGRESSIONAL DISTRICT.

Dr. C. M. Sitman's report as Councillor for the Sixth Congressional District, which is composed of the following parishes: Ascension, East Feliciana, St. Helena, Tangipahoa, Iberville, Livingston, Washington, West Feliciana, East Baton Rouge, Point Coupee, St. Tammany, West Baton Rouge. All of these parishes are organized except St. Helena, Livingston and Washington. St. Helena is a small parish, and it has not a sufficient number of registered physicians to form a society. So myself and several others joined our nearest and most convenient society, Tangipahoa Medical Society, at Amite City, La. I have worked hard to have Livingston and Washington organized, Livingston's physicians are few and so scattered that but little interest so far has been manifested in forming a society. Washington now seems more interested, and I believe will succeed in organizing. East and West Feliciana are organized under the name of Feliciana Medical Society.

Ascension Parish Medical Society has for its officers: President, W. W. McGailliard, Donaldsonville; Vice-President, T. Hanson, Donaldsonville; Secretary and Treasurer, Paul T. Thibodaux, Donaldsonville.

Iberville Parish Medical Society has for its officers: President,

A. A. Allain, Bayou Goula; Vice-President, W. E. Barker, Plaquemines; Secretary, W. L. Grace.

East Baton Rouge Medical Society has for its officers: President, T. P. Singletary, Baton Rouge; Vice-President, T. C. Foreman, Foreman; Secretary, J. A. Carruth, Baton Rouge.

Feliciana Medical Society has for its officers: President, W. Brackhalter, Laurel Hill; Vice-President, R. P. Jones, Clinton; Secretary, E. C. McKowen, Jackson.

Point Coupee Parish Medical Society has for its officers: President, A. Tireuit, Anchor; Vice-President, R. McG. Carruth, New Roads.

St. Tammany Parish Medical Society has for its officers: President, R. B. Paine, Mandeville; Vice-President, N. M. Hebert, Covington; Secretary, J. F. Pigott, Covington.

Tangipahoa Parish Medical Society has for its officers: President, H. G. Morris, Kentwood; Vice-President, C. S. Stewart, Amite City; Secretary and Treasurer, J. L. Lenoir, Amite City.

West Baton Rouge Medical Society has for its officers: President, F. H. Carruth, Lobdell; Vice-President, J. C. Dizier, Walls; Secretary and Treasurer, H. G. Richie, Chamberlin.

All of these societies, with one or two exceptions, are in good working order. Respectfully,

C. M. SITMAN, M. D.

Councillor Sixth Congressional District.

REPORT FOR SEVENTH CONGRESSIONAL DISTRICT.

Mr. President and Gentlemen of the Louisiana State Medical Society:

I am glad to be able to report a better condition of affairs, medically, in the Seventh District than I did last year. Owing to the yellow fever of last summer and fall there was a lull in Society meetings and organization, but they were taken up this spring with renewed vigor, and I trust that within the next year there will be an active society, composed of a majority of physicians, in each parish of the district. Respectfully,

C. A. GARDINER, M. D.,

Councillor Seventh Congressional District.

On motion, duly seconded and carried, the reports of the Councilors were received.

The President called attention to the recommendation in Dr. Graner's report with reference to a medical man on the Tulane Board.

DR. GABERT moved that the recommendation be adopted, which motion was duly carried.

The Secretary of the Council presented names of applicants from unorganized parishes as follows: Dr. W. B. Pierce, Lake Providence; Leon J. Menville, Houma.

Upon motion of Dr. Thibaut the report was received and approved.

The President stated that he had skipped the item, "dropping delinquent members from the roll," as the Treasurer's report had not yet been received, which was necessary to have before this order could be taken up.

Upon motion of Dr. Thibaut the reading of the list of component societies in good standing was passed until the Treasurer's Report should be received.

(To be continued in next issue.)

Medical News Items.

MEETING OF THE AMERICAN DERMATOLOGICAL ASSOCIATION.—The American Dermatological Association elected the following officers for the coming year: President, Dr. Arthur Van Harlingen of Philadelphia; Vice-President, Dr. W. A. Pusey of Chicago; Secretary and Treasurer, Dr. G. W. Wende of Buffalo. Owing to the meeting of the International Dermatological Congress in New York in 1907 this Association decided to hold no meeting at the Congress of Physicians and Surgeons at Washington next May.

COVINGTON FOR TUBERCULOSIS.—At a session of the St. Tammany Parish Medical Society a lecture was delivered recently by Dr. W. J. Durel, of the Durel Tuberculosis Sanitarium, which is located several miles north of Covington. With apologies, he

began his address by saying that he thought the fatality of consumption was chargeable to the medical profession. He thought that failure to detect the disease in its first stages was responsible for a great deal of the fatality attached to tuberculosis. Dr. Durel dwelled with emphasis on the ideal conditions present in Covington and the surrounding country for the treatment of the disease, and held that three essential things in the treatment of the disease were early diagnosis, proper nourishment and plenty of rest in the open air.

After the address a committee composed of Drs. Tolson, Durel and Hebert interviewed the parish health board and urged the necessity of steps being taken to put the towns of St. Tammany Parish in satisfactory sanitary condition.

HOMEOPATHIC FREE CLINIC.—Recently in this city has been opened a free clinic by the homeopathic physicians where medical attention to all poor people of the city will be given. An appeal to the public to assist in keeping up this clinic has been issued by the Hahnemann Medical Society. At the present time the homeopathic physicians are not allowed to treat patients in the various charitable institutions, and it is with a view of practicing charity that these physicians have opened this clinic.

FOR A GREATER TULANE.—At a recent meeting of the Tulane College Alumni Association, composed of the graduates of the Academic Department, some very worthy sentiments were put forth by the members. They urged the necessity for financial assistance from the State and pledged their support to the University. At this meeting Dr. I. I. Lemann was elected president; Dr. Wm. M. Perkins was selected as alumni orator for next year, and Dr. A. Jacoby was made historian.

PENSACOLA NOW HAS THIRD CLASS STATION.—The many friends of Dr. S. R. Mallory Kennedy, now of Pensacola, Fla., and of his father, Dr. T. S. Kennedy, of New Orleans, will no doubt be pleased at the promotion of young Dr. Kennedy to the position of Acting Assistant Surgeon in charge of the third class station of the Marine Hospital Service. Dr. Kennedy, who has also the distinction of being the nephew of Senator Mallory, was recently further distinguished by being elected the vice-president of the Florida State Medical Association,

MILK LICENSES.—The Appellate Division of the Supreme Court has decided that the Board of Health has the power at any time on sufficient grounds to revoke a permit issued for the sale of milk. The question came up when a certain milk company sued the city to recover \$30,000 damages for destroying its business by revoking its licenses. The Board of Health contention was that the company's dairies were found to be in a filthy condition and its milk adulterated and unwholesome. The court unanimously decided that licenses are revokable at the discretion of the Board.—*Medical Record*.

OPENING OF THE ROCKEFELLER INSTITUTE.—The new building of the Rockefeller Institute for Medical Research was formally opened on May 11. Several hundred people were present and addresses were delivered by President Charles William Eliot of Harvard University, President Nicholas Murray Butler of Columbia University, Dr. William Henry Welch and Dr. L. E. Holt. Mr. Rockefeller was not present, but was represented by his son, John D. Rockefeller, Jr. The building stands on a plot which covers twenty-six and one-half city lots at Sixty-sixth Street and Avenue A, and is five stories in height. The cost of the structure was about \$350,000, and the effort was made to have it the most perfectly equipped laboratory building in existence.—*Medical Record*.

MEETING OF THE NEW ORLEANS PHARMACEUTICAL ASSOCIATION.—At the last meeting of the New Orleans Pharmaceutical Association, held in June, the time of the session was taken up principally by discussion of the various bills now before the Legislature. The druggists went on record as opposed to the amendment to the pharmaceutical bill, and also to the substitute to the bill, No. 295, which provides for the regulation of the standard of drugs by the State Board of Health. The following officers were elected: M. T. Breslin, president; M. Stolzenthaler, first vice-president; F. C. Godbold, treasurer, and R. L. Villere, secretary.

STATE BOARD OF PHARMACY EXAMINATION.—At the examination held by the State Board of Pharmacy at New Orleans on the 26th of May there were 27 applicants present, 50 per cent. of this number passing. Those who obtained certificates as registered pharmacists were: Louis F. Brignac, Litcher, La.; R. T.

Moers, J. G. Hirsch, C. A. Desporte, Jr., New Orleans; F. A. Johnson, S. W. Hills, Amite City; Y. V. Terrebonne, Morgan City. For qualified assistants certificates were issued to these persons: Miss Alice L. Louapre, C. A. Walsdorf, E. C. Webre, J. J. Dejoie, New Orleans; M. E. Torean, St. Francisville; F. W. Reggio, Natchitoches; L. E. Carruth, Kentwood. The examining committee comprised: William M. Levy, C. D. Sauvinet, Adam Wirth and F. C. Godbold. The next examination will be held August 3-4, 1906, in New Orleans, when Secretary Godbold says that a large class of applicants are expected on account of the Supreme Court settling the question of the constitutionality of the pharmacy law.

TWENTY-EIGHTH ANNUAL MEETING OF LOUISIANA STATE DENTAL SOCIETY.—The twenty-eighth annual meeting of the Louisiana State Dental Society was held in New Orleans in June, 1906. Dr. Faguet A. Blanchard of Marksville was elected president of the society. The last two sessions of the meeting were devoted to practical demonstrations in the clinic and to business affairs. The society favored the raising of the standard of dental ethics in the State, and increasing its membership among all reputable practitioners.

GRADUATING EXERCISES OF THE MEDICAL DEPARTMENT of the University of Arkansas took place recently and 26 were graduated from this school.

NEW ORLEANS DISPENSARY HAS ANNIVERSARY.—The New Orleans Dispensary for Women and Children celebrated its first anniversary on June 1 at No. 810 Felicity Street. Many speakers praised the work in behalf of women and the Mayor promised to have the City Council help the institution. During the year three thousand women and children had been treated, and these had come from all the surrounding parishes besides the city. The ultimate desire of the founders is to build a modern hospital, but to do this they must have the hearty co-operation and good-will of the people of Louisiana.

GRADUATION EXERCISES OF THE NEW ORLEANS SANITARIUM TRAINING SCHOOL FOR NURSES.—On May 31, 1906, the graduation exercises of the New Orleans Sanitarium Training School for

Nurses took place in a very informal manner at the sanitarium. Nine young ladies received diplomas after a three-year course. The graduates are: Miss Myra Tisdale, who received the highest average, thus giving her first place in her class; Misses Gussie Melancon, Bertha Gunn, Ursula Armstrong, Lottie Glazner, Eva Parker, Marion Levy, Stella Farish and Mabel Harrison.

PERSONALS: Dr. and Mrs. J. Hope Lamb, of Quarantine Station, were in New Orleans for a few days during the month. Mrs. Lamb left with her son for Denver, and Dr. Lamb returned to Quarantine Station.

Dr. Leon Cusachs returned from Porto Barrios, Guatemala, after an absence of three months.

Dr. G. H. Lee, of Galveston, spent a few days here during the month.

Dr. George D. Kahlo, professor of medicine in the Indiana Medical College, has accepted the position of resident physician at French Lick Springs.

Dr. E. M. Toler has moved from Woodland, La., to Centerville, Miss.

Dr. M. Thomas Lanaux sailed for New York en route to Baltimore, where he will take a post-graduate course in medicine at the Johns Hopkins Hospital.

Dr. N. K. Vance, of Shreveport, La., medical inspector at Port Cortez for the Marine Hospital Service, returned to New Orleans lately quite ill, and was taken to the Sanitarium for treatment.

Dr. Isadore Dyer with Dr. H. E. Menage attended the meeting of the American Dermatological Association at Cleveland, Ohio, at the end of May.

Dr. F. T. Gouaux, son of Dr. T. Gouaux of this city, graduated on June 2 from the Medico Chirurgical College in Philadelphia. While in Philadelphia Dr. Gouaux was under the especial care of Dr. Ernest Laplace, formerly of New Orleans, who is a professor of surgery at the Medico-Chirurgical College.

MARRIED: On May 30, 1906, the wedding of Dr. Jefferson Davis Bloom to Miss Mary Rose Wenban took place. Mrs. Bloom is a graduate from the Carney Hospital, Boston, and for a number of years was the principal of the Training School for Nurses at the

Hotel Dieu in New Orleans. Dr. and Mrs. Bloom sailed for Europe the following day to enjoy a wedding trip of several months' duration.

Dr. Joseph Hume, of New Orleans, was married at Washington, D. C., on June 2, to Miss Mary A. Read, of Washington, D. C. Dr. and Mrs. Hume are now settled in New Orleans after a short wedding trip through the North.

DIED: Dr. Cornelius Beard, formerly of New Orleans but lately a resident of Brookline, Mass., died on May 29, 1906, at the age of seventy years.

Dr. M. M. Lowe, one of the prominent physicians of Algiers, La., died at his home last month. Dr. Lowe leaves two sons who are physicians and one who is a druggist. The doctor was a member of the Louisiana State Medical Society at the time of his death, and was for many years prominently active in all affairs of medical note.

Dr. J. W. Dupree, physician of the Louisiana State University in Baton Rouge, died on May 26, 1906, at a Cincinnati sanitarium. Dr. Dupree held many public offices during his lifetime, among which was that of Surgeon General of the State of Louisiana.

Dr. George A. Ketchum, Mobile's oldest and most highly esteemed physician, passed away at his home on May 29, 1906. Dr. Ketchum was seventy-one years of age and was regarded as Mobile's pioneer physician.

Publications Received.

Lea Bros. & Co., Philadelphia and New York, 1906.

Introduction to Materia Medica and Pharmacology, by Oliver T. Osborne, M. D.

The Practice of Gynecology, edited by J. Wesley Bovee, M. D.

D. Appleton & Co., New York and London, 1906.

Operative Otology. Surgical Pathology and Treatment of Diseases of the Ear. Blake-Reik.

Funk & Wagnalls Co., New York and London, 1906.

The Health-Care of the Baby, by Louis Fischer, M. D.

Houghton, Mifflin & Co., Boston and New York, 1906.

The Subconscious, by Joseph Jastrow.

J. B. Lippincott Co., Philadelphia and London, 1906.

Consumption, by John Bessner Huber, A. M., M. D.

Blakiston's Son & Co., Philadelphia and New York, 1906.

Heath's Manual of Minor Surgery and Bandaging. 13th Edition. Reviewed by Bilton Pollard, F. R. C. S.

E. B. Treat & Co., New York, 1906.

Translations of the American Pediatric Society. Vol. XVII.

Year-Book Publishing Co., Chicago, 1906.

Practical Medicine Series, 1906. Head. Vol. III. (*The Eye, Ear, Nose and Throat*.)

Miscellaneous.

Biennial Report of the Department of Health of the City of Chicago for the Years 1904-1905.

Sixteenth Annual Report of the Eye, Ear, Nose and Throat Hospital, 1905.

Prevention of Tuberculosis. (Board of Health of the State of New Jersey.)

Prospectus of the American Pharmacologic Society and the Working Bulletin System, by F. E. Stewart, M. D.

Twentieth Annual Report of the State Board of Health and Vital Statistics of the Commonwealth of Pennsylvania.

The Cactus. (University of Texas.)

Manual de Practica Sanitaria. Dr. Enrique B. Barnet.

Human Sexuality, by Dr. J. Richardson Parke. (The Professional Publishing Co., Philadelphia, 1906.)

Tuberculosis as I See It, by Judd Q. Lloyd.

Apropos of Spelling Reform, by F. Sturges Allen (The Bradley White Co., New York, 1906.)

The Non-Surgical Treatment of Appendicitis, by Dr. Harry Tyldesley.

Sixty-second Annual Announcement of the Eclectic Medical Institution, Cincinnati, O.

Report of the Department of Public Health of the Isthmian Canal Commission for the Month of April, 1906. Col. W. E. Gorgas.

Reprints.

Commercialism, Professionalism and Their Mutual Relations, a Series of Editorial Articles from the St. Louis Medical Review, from June 3, 1905, to June 13, 1906.

Catarrhal Deafness, by Dr. Sargent F. Snow.

MORTUARY REPORT OF NEW ORLEANS.

(Computed from the Monthly Report of the Board of Health of the City of New Orleans.)
FOR MAY, 1906.

CAUSE.	White.	Colored.	Total.
Typhoid Fever.....	4	2	6
Intermittent Fever (Malarial Cachexia)	3	1	4
Smallpox.....		1	1
Measles	2		2
Scarlet Fever.....	6		6
Whooping Cough.....	2	2	4
Diphtheria and Croup.....	2	1	3
Influenza	1	2	3
Cholera Nostras.....	1		1
Pyemia and Septicemia	5	1	6
Tuberculosis.....	47	43	90
Cancer.....	15	6	21
Rheumatism and Gout	1		1
Diabetes			
Alcoholism	2	1	3
Encephalitis and Meningitis.....	6	4	10
Locomotor Ataxia.....	2		2
Congestion, Hemorrhage and Softening of Brain.....	18	6	24
Paralysis	2	1	3
Convulsions of Infants	1	1	2
Other Diseases of Infancy	31	16	47
Tetanus.....		2	2
Other Nervous Diseases			
Heart Diseases.....	39	29	68
Bronchitis	1	3	4
Pneumonia and Broncho-Pneumonia.....	10	11	21
Other Respiratory Diseases.....	3	1	4
Ulcer of Stomach.....			
Other Diseases of the Stomach	2		2
Diarrhea, Dysentery and Enteritis.....	68	36	104
Hernia, Intestinal Obstruction.....	1	2	3
Cirrhosis of Liver.....	7	6	13
Other Diseases of the Liver	1	1	2
Simple Peritonitis	3	1	4
Appendicitis.....	2		2
Bright's Disease	16	14	30
Other Genito-Urinary Diseases.....	9	3	12
Puerperal Diseases	4		4
Senile Debility.....	13	6	19
Suicide	5	1	6
Injuries.....	22	25	47
All Other Causes.....	17	12	29
TOTAL.....	374	241	615

Still-born Children—White, 25; colored, 23; total, 48.

Population of City (estimated)—White, 245,000; colored, 88,000; total, 333,000.

Death Rate per 1000 per annum for Month—White, 18.32; colored, 32.86; total, 22.16.

METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmospheric pressure 29.90
Mean temperature 75.
Total precipitation0.70 inches.
Prevailing direction of wind, northeast,

New Orleans Medical and Surgical Journal.

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AUGUST, 1906.

No. 2

Original Articles.

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. A complimentary edition of one hundred reprints of his article will be furnished each contributor should he so desire. Covers for same, or any number of reprints, may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

Affections Characterized by Gastro-Enteric Catarrh.

By G. PAUL LAROQUE, M. D., Lecturer and Bedside Instructor in Surgery,
University College of Medicine, Clinical Assistant Surgeon St. Luke's
and Virginia Hospitals, etc., Richmond, Va.

With many intra-abdominal affections, the phenomena of gastroenteritis constitute an essential part of the symptom complex; in some the signs of this condition are relatively inconspicuous; and, in still others, inflammation is entirely absent.

The alimentary signs may be referred chiefly or wholly to gastric or to intestinal disease, though in many cases the signs of combined gastroenteritis will be presented.

ETIOLOGY.—Except in cases of infection by certain specific microorganisms, the pathogenic action of bacteria in the gastro intestinal canal is antagonized, inhibited and often prevented by conditions of local and general health. The specific causative agents of dysentery, cholera morbus, influenza, Asiatic cholera, and certain other infectious processes may excite disease independently of impaired

resisting power, though such enfeeblement greatly favors their action. The primary local lesions incident to typhoid fever, tuberculosis, syphilis and actinomycosis are rather ulcerative than truly inflammatory in nature, though with the specific ulceration incident to these processes is generally associated inflammation, due to the action of microörganisms normally present upon the diseased mucous membrane.

Other exciting causes of inflammation may be introduced into the canal from without, or from structures in anatomic relation to the stomach and bowels, or rarely the organisms may be deposited in the walls of these structures as emboli from remote sources.

Since, in many cases, the phenomena of gastroenteric catarrh are due to localized causes remediable by surgical procedures, it is essential to recognize and to differentiate in the individual case the underlying etiologic factors. The following classification may be useful:

(1) Ingestive gastroenteritis.—(a) Dietetic—Dependent upon excessive quantity or irritative quality of food, irregularity in taking meals, ingestion of excessively hot or cold fluids. (1) Simple catarrh, (2) cholera morbus, (3) ptomain and leukomain poisoning. (b) Alcoholic (acute and chronic). (c) Medicinal—Due to a single administration of a large dose, or prolonged administration in small doses, of such drugs as mercury, arsenic, antimony, iodides, bromides, salicylates, the essential oils, balsams, etc., etc. (d) Corrosive—Incident to accidental or intentional ingestion of certain concentrated acids, alkalies, metals and other caustic agents. Phosphorus poisoning is included in this group.

(2) Systemic, and symptomatic gastroenteritis.—The systemic affection occurs during the course of certain constitutional affections; notably, rickets, purpura, scurvy, gout, diabetes, phthisis, acute and chronic suppurative diseases, especially when drainage is imperfect, the uremic state, chronic lead poisoning, Addison's disease, and with exophthalmic goitre.

Symptomatic catarrh is noted during pregnancy and diseased states of the female pelvic organs, acute yellow atrophy of the liver, malarial "biliousness," certain extra-alimentary febrile diseases, chlorosis, uncompensated circulatory disease, and certain affections recently described by Osler, and characterized by erythematous skin lesions.

In many of these affections the catarrh is doubtless infectious in origin, arising from the action of normally existing bacteria on the feebly resistant mucous membrane.

(3) Infectious gastroenteritis.—This is due to mixed infection by specific and non-specific microorganisms and includes: Typhoid, tuberculous, syphilitic and dysenteric disease, gastrointestinal actinomycosis, measles, influenza, infantile diarrhea, cholera infantum, Asiatic cholera, pyemic abscess formation, diphtheritic infection, etc. In this group should also be included the acute gastroenteritis often attributed to "taking cold."

(4) Traumatic gastroenteritis.—This is caused by foreign body irritation, enteric calculi, fecal accumulation, animal parasites and rarely external traumatism.

(5) Mechanical gastroenteritis is that variety dependent upon benign or malignant infiltration, stricture or tumor formation, ulceration, sclerosis, congenital and acquired deformities, viscerop-tosis, mechanical obstruction, hemorrhoids and other varicosities, and due to traction upon and interference with the normal mobility of any part of the stomach or intestines caused by certain movable kidneys, tumors and adherent structures.

(6) Concomitant gastroenteritis.—This is incident to disease of the liver and biliary apparatus, pancreas, appendix vermiformis, Meckel's diverticulum, the omentum and peritoneum, portal engorgement; and to carcinoma, inflammation and other affections of the esophagus, throat and oral cavity.

(7) Functional gastroenteritis.—This results from the imperfect digestion, incident to muscular atony and paresis, excessive secretory or muscular activity, or to nervo-muscular incoördination.

This is the form of true catarrh, is always secondary to various manifestations of functional derangement characterized by symptoms in many respects similar to those of gastroenteritis, but in which the pathologic phenomena of inflammation are not primarily present (see below).

SYMPTOMS.—Certain phenomena point definitely to gastroenteric disease, others are constantly present, though not confined to such affections, while still other signs may or may not be noted, and are therefore of little positive or negative diagnostic value.

The most valuable cardinal symptoms are those referable to altera-

tion of function; signs incident to the morbid process; and the presence of morbid products in the oral and anal discharges.

Gastroenteritis may be acute, subacute or chronic. The phenomena of chronic disease may be continuous, with or without intervals of diminished or exaggerated intensity; or the signs may manifest a distinct tendency to recur after varying periods of entire absence.

The normal relation between the various parts of the alimentary system, both anatomically and physiologically, is so intimate that individual functions of various parts are mutually interdependent. Gastric and enteric affections are frequently combined, though in most cases it is practicable to determine the primary or predominant affections.

Acute Gastritis.—Symptoms—(1) Loss of appetite amounting generally to disgust for food. (2) Foul breath, coated tongue, pasty sensation in the mouth. (3) Epigastric fullness or distress, more marked after eating, may amount to distinct pain. (4) Nausea, retching, eructations and vomiting are spontaneous and easily provoked. Evacuation of the stomach is often conducive to relief. A single copious bowel movement is beneficial, saline purgation often curative. (5) The vomited material consists at first of undigested food (if such has been taken), large quantities of gastric mucus, water, generally a small amount of HCl, and is often of sour odor and taste, due to butyric, lactic and other acids of fermentation. Later bile may be ejected, and the material is subacid, neutral or alkaline. Dependent upon the nature and severity of the inflammation, small quantities of blood, and rarely pus, may be vomited. (6) Thirst for cool drinks is generally noted and small quantities of such are grateful to the inflamed, hot mucous membrane. (7) Evidence of an exciting cause may generally be discovered.

Superficial and deep tenderness in the epigastrium is noted. Gastric and intestinal colic may occur. Constipation is the rule, unless the gastritis is associated with enteritis. Headache is generally noted. Fever is conspicuous only in children, though it may occur in adults. Such symptoms as these are of little value in differential diagnosis.

Acute Enteritis.—Certain cardinal symptoms are common to all

varieties. (1) Enteric colic. (2) Pain and tenderness, incident to inflammation and located in the part affected. (3) Borborygmus and exaggerated peristalsis. (4) Excessive mucus and in severe cases blood and pus in the intestinal discharge. (5) Indigestion, both gastric and intestinal, is marked by variable degrees of anorexia and by imperfectly digested food material in the evacuations. (6) Diarrhea is present in greater or less degree, except in rare cases in which the process is confined to the duodenum, or when complicated by peritonitis or obstruction. The intensity of diarrhea varies directly with the extent of mucous membrane involvement, and in cases of localized areas with the nearness to the anus. The fecal material is always foul, mucoid and gaseous, generally watery, often bilious, and in severe cases bloody and purulent. A healthy colon may absorb much of the watery element of the material. Mechanical obstruction below the cecum, or general peristaltic paralysis, may prevent defecation. In such cases stercoreous vomiting replaces diarrhea. (7) Oliguria and quantitative thirst are in intensity directly proportionate to the watery material. (8) Fever, dependent upon absorption of toxic material, is often, though not always, inversely as diarrhea, and in children hyperpyrexia is common. Collapse may ensue. (9) Gaseous intestinal distention, always present, is dependent upon fermentation and varies inversely with peristaltic activity. (10) Etiologic factors must be sought.

Certain signs point to involvement of certain areas.

Duodenitis.—Occasionally hepatic colic or jaundice appear secondary to the gastroenteric signs, incident to extension of the process to the biliary passages. Constipation may exist, but the feces still contain mucus. The signs of concomitant or primary gastric catarrh are also present. Tenderness is chiefly above and to the right of the umbilicus.

It is from this source that infection of the biliary passages and portal veins most commonly arise. Biliary colic, localized pain and tenderness at the junction of the middle and lower thirds of a line drawn from the ninth right costochondral junction to the umbilicus (termination of the 8th and 9th dorsal nerves, Mayo-Robson point), or directly over the gall bladder, with fever, leukocytosis, rigidity and perhaps bile retention, would point to such infection.

Ileocolitis.—Pain and tenderness most severe in the right iliac fossa and along the course of the colon, marked fluid diarrhea with large quantities of mucus seen as masses in the fecal matter, point to ileo-colitis. Inflammation of this area (cecitis) is often attended or followed by appendicitis. The sudden substitution of constipation and vomiting for diarrhea, and of fixation for protective rigidity of the right rectus, especially if attended with a rise of temperature and leukocytosis, would point positively to appendiceal peritonitis.

Sigmoiditis and *proctitis* are attended by pain and tenderness in the left iliac fossa, burning, teasing, often tormenting tenesmus, with painful, frequent, small mucoid, often bloody and purulent evacuations. Such symptoms call invariably for local examination.

Chronic gastritis and *chronic enteritis* are invariably associated in greater or less degree, incident to the intimate anatomic relation, and mutual interdependence of function in the various parts of the canal. In many cases, partial functional compensation, particularly on the part of the intestines, may occur, but this is generally transient, never perfect, and is subject to periodic manifestations of complete failure. The localized and predominant signs in a given case are dependent largely, though not entirely, upon the location and nature of the underlying morbid process and causative factor.

(1) Alteration of appetite. This, on the whole, is impaired. There may be quantitative or qualitative alterations. Certain articles hitherto relished are no longer desired, and, in general, smaller total food quantities are ingested. In marked cases there may be complete disgust even at the sight or odor of food; the patient "eats to live." In the milder forms of catarrhal inflammation only certain meals may not be enjoyed. Such anorexia is often attributed to slight fatigue (nervous or muscular), and is always conspicuous when the bowels are constipated. Excessive mucus in the stomach is attended by anorexia, and this may be incident to excessive mucous secretion, to mechanical obstruction or to constipation. After evacuation either by the tube, by vomiting or purging, and in many cases an hour or so after the ingestion of water, the appetite may be improved. In many cases the patient may feel hungry until the food is seen or tasted, whereupon the appetite is immediately lost. Liquids are generally relished; thirst is

often conspicuous. In the catarrhal forms, condiments may be relished, and when subacidity exists acids are craved. Alternating periods of bulimia and anorexia may occur. The milder manifestations of such perversions of appetite, especially when persistent or constantly recurrent, demand a search for the underlying cause.

(2) Nausea, retching, eructations and vomiting. These symptoms are generally caused either by retention of inflammatory and fermentation products, or by the presence of food. They are generally more marked during the period of either gastric or intestinal digestion, *i. e.*, immediately or two or three hours after meals. When noted more markedly in the morning, especially before breakfast, localized causative lesions in the stomach should be suspected. The morning vomiting of gastric carcinoma is classical, and the retching morning nausea of chronic alcoholic gastritis is well known even to the laity. Gaseous and acid eructations are common, and point to fermentation of material retained in the stomach. The vomitus is generally copious, especially so when pyloric obstruction exists, consisting of food material, water, excessive mucus, fermentation bacteria and their products (butyric, acetic, lactic and other acids), often blood and sometimes pus. Large quantities of foul, watery, frothy material resembling "water brash" are characteristic of the distended, chronically inflamed stomachs, incident to pyloric obstruction. In the latter stages of the act, when vomiting is violent or persistent, bile appears with the alkaline duodenal fluid. HCl in the common forms of disease is invariably diminished, often absent. With the gastritis constantly dependent upon gastric ulcer, and often combined with, or resulting from, certain neuroses of the stomach, HCl may be normal in amount, or excessive. In these cases fermentation bacteria and their acids are inconspicuous or absent.

(3) Constipation and diarrhea. In general, these signs are conspicuous in almost direct relation to the nearness of the seat of the disease to the mouth and anus, respectively. This is not invariably true. The reflex intestinal rigidity incident to deep seated—*i. e.*, submucous or muscular—inflammation, even of the colon, is manifested by constipation, and the inhibitory constipation of certain painful rectal affections is well known. The two symptoms may alternate with each other, and this regardless of the

predominant seat of disease, though in gastric affections constipation is habitual, and in colonic disease the rule is diarrhea. Diarrhea in one past 40 years of age, appearing immediately upon arising in the morning, is strongly suggestive of carcinoma of the rectum or sigmoid.

The stools are generally foul; the passage of excessive mucus, either mixed with or forming a coating of the fecal mass, is the rule. In all cases there is excessive flatus. Excessive steatorrhea and the presence of undigested meat fiber in large amounts is characteristic of pancreatic disease, though any affection characterized by deficiency of bile in the bowel may be the cause. Acholia, characterized by light colored gray or yellow feces, generally hard and dry, is indicative of biliary obstruction, and is generally attended by icterus and biliuria. Constipation is the rule with acholia, though foul, watery diarrhea may exist with complete biliary obstruction. Tarry stools point to bleeding high in the canal, generally duodenal or gastric ulcer, though blood long retained in the colon becomes distinctly black. Bright, red blood, per anus, comes from the rectum or colon. Minute quantities of blood demand chemical test for their detection. Pus, in conspicuous amount, means disease of the sigmoid or rectum, though a sudden discharge of purulent material may rarely indicate rupture of an abscess into any part of the alimentary tract. The significance in the feces of animal parasites, their eggs, larvæ and segments of tapeworm is obvious:

(4) Pain and tenderness. These may be entirely absent, insignificant or periodically harassing. Gastro-intestinal colic is apt to occur at irregular intervals. Local pain and tenderness may generally be elicited over the region of the disease. The degree of pain and tenderness are in general proportionate to that of the associated specific lesion.

These signs are more marked at some period of digestion, either gastric or intestinal, and may be entirely absent when the part affected is at rest. Vomiting, purging and lavage in most cases produce marked relief. In the mild cases, moderate fullness in the epigastric, umbilical or lateral regions may be the only manifestation of pain. "Heartburn" is conspicuous in gastric disease.

(5) Borborygmus is marked with enteric catarrh. The loud, rumbling noises may be the cause of much complaint.

(6) Gastric and intestinal tympany are the rule, though after paroxysms of copious vomiting, or when associated with diarrhea, the belly may be flat or retracted.

(7) Peristaltic activity as determined by inspection, palpation and auscultation is, in a measure, *pari passu* with constipation and diarrhea. Mechanical lesions, however, are attended by active peristalsis above the seat of disease and compensatory hypertrophy of the muscular coat may cause these movements to be easily recognized. In many cases motor insufficiency is conspicuous, and this is indicative of failure of compensation. Atonic dilatation finally ensues.

(8) Absorption, as shown by the salol, potassium iodide and other test, is delayed. Prolongation of gastric digestion is easily determined.

(9) The tongue is flabby, heavily coated, often enlarged and indented by the teeth. The breath is foul, there is a pasty sensation in the mouth, and chronic pharyngitis generally coexists.

(10) An exciting causative factor should, in every case, be sought.

Certain accessory symptoms are generally present, but are in no way diagnostic. The complexion is sallow, anemia exists, the skin may be dry or moist. Vertigo, headache, somnia or insomnia, hypochondriasis and other nervous symptoms are common. "Stomach cough" is frequent. The urine is generally diminished, concentrated and contains an excess of indican. Debility and emaciation develop, but, save in malignant disease, profound cachexia does not occur. All symptoms are subject to exacerbations and remissions of intensity.

DIFFERENTIAL DIAGNOSIS.—It is important to differentiate the phenomena of gastro-intestinal inflammation from certain conspicuous, incidental, functional (it may be combined, though often isolated) signs of gastroenteric disturbance, incident to non-inflammatory affections of the alimentary tract and its accessory structures, and appearing either accidentally or as a cardinal symptom of certain extra-alimentary diseases. The phenomena of these affections may be appropriately designated *pseudo gastroenteritis*, though, when prolonged, a true catarrhal inflammation may be produced. To this false gastroenteric catarrh the writer would call especial attention.

This group included the sensory, secretory and motor derangement incident to gastric and enteric neuralgia, hyperesthesia, myasthenia, neurasthenia, hysteria, etc., recurrent bilious attacks associated with errors of refraction and grave ocular defects, the crises of tabes, other spinal diseases, and sometimes pneumonia; the vomiting of middle ear and auditory nerve disease; the vomiting and constipation of meningitis, brain tumors and other cerebral affections; the reactionary nausea and vomiting of shock; the morning nausea and vomiting of pregnancy; the preconvulsive vomiting of certain cases of epilepsy, and that sometimes noticed just before apoplexy and the reflex gastric disturbances incident to such severe nerve irritation as caused by violent renal or utero-ovarian colic, torsion, injury or acute inflammation of an ovarian cyst or testicle; spinal and cerebral contusion, and injuries or diseases of the abdominal wall, parietal peritoneum and omentum. The instantaneous functional disturbance incident to the splanchnic nerve irritation attendant upon disease of peri- and para-alimentary structures, such as strangulation of gut, acute pancreatitis and peritoneal disease, is always causative of inflammation of the tract, and the onset of true upon false gastroenteritis is often undeterminable.

The nausea and vomiting due to renal, utero-ovarian and testicular colic, spinal, cerebral and abdominal traumatism is generally transient and accompanied by greater or less shock.

The diagnosis of pure functional disturbances depends, first, upon the study of the positive and negative individual gastroenteric signs presented. Second, upon the discovery of signs pointing to the disease of the extra-alimentary structures (this is of great importance in cases in which the phenomena of gastroenteric catarrh exist incidentally, or as in independent condition), and finally upon the intelligent consideration in the light of fundamental anatomic, physiologic and pathologic laws, of the correlation of symptoms to each other, and as a constant part of the general symptom complex. The symptoms of pure functional affections are erratic, changeable, vary greatly in intensity; and individual symptoms are greatly exaggerated in comparison with others. The signs of organic disease behave in no such erratic way. There are no single pathognomonic alimentary signs of these affections, and in every

case a searching examination must be made for the caustive factor. Most so-called neuroses have for their basis an organic morbid process, of which gastralgia and enteralgia, hyper- and hypochlorhydria, hyperesthesia, etc., etc., are prominent symptoms. A diagnosis of gastric hysteria or neurasthenia can be made only by rigid exclusion after prolonged study.

Certain phenomena, if present, point positively to gastroenteric organic disease. Obstinate diarrhea, pernicious, continuous vomiting, excessive mucus and fermentation products in the vomits or fecal material; gastric and intestinal hemorrhage; acholic feces; absolute constipation, even to flatus; stercoraceous vomiting; dilated stomach; these are among such positive signs.

Clinical significance of gastroenteritis: The affections characterized by the symptom complex of acute or chronic gastroenteric inflammation may be classified in groups dependent upon the association of certain prominent symptoms. Acute gastroenteritis may represent an exacerbation of a chronic process, and this must be determined from the history.

A. Affections characterized by gastroenteritis, with conspicuous abdominal pain and diarrhea:

<p>Dietetic gastroenteritis (diffuse), especially that due to qualitative dietetic errors. (1) Simple catarrh. (2) Cholera morbus. (3) Ptomain and leukomain poisoning. Medicinal gastroenteritis. Corrosive gastroenteritis. Catarrh of the bowels incident to "taking cold." Infantile Diarrhea. Cholera Infantum. Cholera nostras and true cholera. Measles, influenza and other systemic infections. Dysentery.</p>	<p>} Generally accompanied also by vomiting.</p>	<p>Typhoid, tuberculous, syphilitic, diphtheritic and actinomycotic ulceration. Certain erythematous skin affections. Rickets. Gout. (In this the symptoms are apt to be paroxysmal.) Purpura. Scurvy. Uremia, generally accompanied by constipation, often, paroxysmal or terminal diarrhea. Amyloid disease of intestines. Addison's disease (diarrhea is apt to be a terminal symptom).</p>
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Acute yellow atrophy of the liver.

Pyemia (abscesses in the bowels).

Puerperal peritonitis, not always diarrhea.

Foreign body irritation (non-obstructive).

Gallstones in the bowel.

Enteroliths and swallowed material.

Fecal concretions.

Intestinal parasites.

Non-obstructive tumors and strictures.

Intestinal obstruction, high in canal.

Intussusception, any part of the bowel.

May be alternating periods of diarrhea. Constipation is the rule.

Diarrhea of the false variety may be noted.

B. Affections characterized by abdominal pain and gastroenteritis with constipation, nausea and vomiting.

Gastritis; duodenitis. Of any origin. See etiology.

Gastric or duodenal ulcer.

Cholecystitis, cholangitis and cholelithiasis.

Appendicitis.

Pancreatitis, tumors of pancreas, gall bladder or ducts.

Mesenteric embolism and thrombosis (may be false diarrhea with intestinal hemorrhage).

Intestinal obstruction (complete.)

Peritonitis of any origin, contusion of the peritoneum.

Systemic infectious fevers, especially malaria.

Diabetes and Addison's disease (nausea and vomiting may not be present).

Uremia (often diarrhea).

Gout (diarrhea generally occurs paroxysmally).

Uncompensated circulatory disease.

Cirrhosis of the liver.

Pregnancy and diseases of the female pelvic organs.

Visceroptosis (symptoms tend to alternate and remit).

Localized rectal affections (nausea and vomiting generally absent, constipation is inhibitory, may be tenesmus).

With this brief outline it is the writer's purpose merely to direct attention to the importance of an early recognition of the signs of true gastroenteric catarrh as contrasted with the phenomena of pseudo gastroenteritis, and to urge a painstaking, careful, differential diagnosis, based on analysis of the individual case.

Many lists of affections classified according to the predominance of certain signs in the symptoms complex may be formulated; but, on the whole, an intelligent, systematic and searching study of the individual case in relation to its history and evolution of the symp-

tom complex, together with the physical findings, is the logical and most satisfactory method of determining, by a process of analysis rather than exclusion, the underlying causative lesion.

Abortion.*

By DR. THOS. A. ROY, Avoyelles Parish.

The usual period of utero-gestation is about 270 days, the ovum may be expelled at any time by premature uterine action, due to many causes, some of which I will endeavor to bring before you.

By abortion is meant that premature expulsion of the ovum or fetus before the ninth month. If before the two hundredth day it is also expressed as the non-viable, and if later the viable period. Numerous instances and some of personal experience have demonstrated that a fetus of 200 days may and at times does live. While there are recorded cases of less than that period, they mostly belong to a stretch of imagination by members of the incubating club. Abortion may take place at any time after conception, and, if it occurs soon after, the accompanying symptoms are in the majority of cases mild, but are progressively more pronounced and severer the older the conception, all considered. It is, therefore, my observation that abortion resulting from conception preceding the catamenial period by a few days may pass off without the knowledge of the patient, except it be a slight suspicion, which usually disappears in a few days or weeks. The increased hemorrhage, as compared with usual monthly flow, is very often confounded with the menses, and it is often assumed that they (the symptoms) are present because of a deferred menses. It therefore results that the physician is seldom called to see abortion of a few days' conception.

The majority of abortions are met with in the early months of pregnancy, even assuming that the very early abortion be unnoticed. The reason for this condition presupposes an innumerable multiplicity of well-understood laws of nature, which vary in mildness or intensity but is always present. To illustrate, I will call your attention to the anatomical construction of the parts which environ our subject. The decidua and the chorion being of a lax character

*Read before Avoyelles Parish Medical Society.

render them peculiarly susceptible to the reception of causes, which result in hemorrhage into the space between them, thus interfering with the circulation between the ovum and mother before the formation of the placenta. This condition invites causes which may emanate locally or generally, internally or externally, and of these causes most often met with I will call your attention, first, to local causes, any uterine displacement, lacerated cervix, endometritis, endocervicitis, salpingitis or gonorrhea; of the general causes, I call your attention only to tuberculosis, pneumonia, smallpox and syphilis; other causes, such as traumatism and criminal abortion, will not be considered. To make a résumé of the causes of abortion and bring together their salient features, as manifested by phenomena of various degrees of mildness or severity, of early and late abortions, I will say that, in general, any morbidity whatever which lowers the powers of resistance of the woman serves and is employed by nature to rid itself of the burden of gestation. We here learn the lesson that any cause which tends to diminish the vitality of the mother invites reflexes of sufficient force, which is transmitted to the uterus; the impregnated uterus being the center office to which and from which reflexes are sent at all the various stations located over the woman's anatomical map. We notice the proneness of the head, the heart, the stomach, the kidney, the intestines, all, in fact, answering the alarms sent from the uterus, and it follows that, if any of the enumerated points susceptible to the nervous reflexes of the uterus be in a morbid condition, they in turn serve and are used as a cause of abortion.

A further and yet fairly unexplained cause of abortion is habitual abortion. My observation is that it is always due to local causes.

Of the symptoms only a passing attention will be given. Your familiarity with this subject precludes the necessity of making any elaborate list. Only one of the conditions affecting our diagnosis and mode of procedure need here be explained. I refer to that condition which should guide us when an abortion has taken place. The mere fact of a hemorrhage during gestation does not necessarily imply that the life of the fetus is extinguished and that the ovum or fetus will be or must be expelled. We know that considerable time may elapse between the actual death of a fetus and its expulsion. Likewise, apparently, an absolute proof of death, as per a

series of symptoms designating death, does not establish it. My observation is that in some cases the fetus is still alive and quite able to lengthen its stay in the stormed uterus to full gestation.

I suggest, as an absolute proof of death of fetus, without having to await actual putrefaction, that a large patulous os, a dilated cervix, hypogastric pain of a periodic character, lumbar pain together with clotty discharges of blood of a peculiarly, and of characteristic fresh blood odor, presupposes abortion to be beyond remedial correction, and expulsion, either voluntary or forcible, must be had.

Under the heading of sequelæ of abortion I wish to call your attention to some troublesome complications, of which quite a number exist, but here wish to cite only one. I refer to hemorrhage, either from a subinvolved uterus or a lacerated cervix or an endometritis, and in order to focus your attention more forcibly on this point I will give you a short history of a case. In 1900 I was called to see a woman, multipara, who had aborted a few hours before; pregnancy of three months; date, May 2; the fetus and secundines having been expelled before my arrival; patient bleeding profusely. I prescribed ergot and rest. The following day considerable hemorrhage took place. I curetted the uterus, flushed the cavity with normal salt solution (112°), packed with gauze and continued ergot. This mode of treatment was varied, but in the main continued and repeated every day, except the curettage; but the hemorrhage, at times very scanty, was still continued, and the patient progressively weaker up to May 27. Having made arrangements to leave my practice for two months, I confess I was glad when the time came to relieve me of this intractable hemorrhage. I transferred my patient to a willing confrere, who manifested a great deal of interest in this most interesting case. My confrere took possession of the patient on May 28. Two months later I returned, my confrere not telling me anything of the patient, for some reasons not necessary here to mention, and I took it for granted that the poor woman was all over her trouble. The husband of this patient, looking more dead than alive, due to lack of sleep, anxiety, worry and questionable cooking, entered the office. I was really glad to see him. You all know how acutely sensitive and deeply interested we become for our poor client when we

have spent several hundred dollars and two months out skylarking, and immediately inquired about his wife, and his answer was that he wanted me to come and see her. She was still bleeding, and but a mere shadow of her former self remained. I began to be sorry that I had at first sight of him allowed myself to feel any interest in him or those who depended on him; in fact, I wished I had not seen him at all.

On August 7 I visited the woman. She was practically pulseless, white as a sheet, cold and still losing blood—a mere oozing; had never had any fever. The usual, the same treatment as aforesaid, was again practiced for four weeks; when, for unaccountable reasons, oozing stopped, and she ultimately recovered her former health, having been sick 131 days. This woman is not of a hemorrhagic diathesis. This lady evidently suffered because of a subinvolute uterus.

Aside from subinvolution, which, in the main, is usually the factor present in most cases of hemorrhage of long duration, this subinvolution is very often the result of a lacerated cervix or displacement of the uterus from its normal position.

The treatment of abortion after the expulsion relates entirely to cause and effect, the cause very often being obscured by innumerable false signs and symptoms, but, in a general way, I would say that either blunt or sharp curettage, as the case may demand, hot saline douches, packing and correcting abnormalities and supporting measures, should in most cases suffice.

As regards those cases where death of fetus is not certain the expectant plan of treatment, coupled with measures addressed to correct any and all symptoms, should be practiced.

Louisiana State Medical Society Proceedings.

(EDITED BY PUBLICATION COMMITTEE).

P. L. Thibaut, M. D., Chairman.

FIRST DAY, MAY 8, 1906. AFTERNOON SESSION.

DR. F. M. THORNHILL read the following paper:

Typhoid Fever.

An explanation as to why I should have selected what may be considered by some well nigh a threadbare subject, for discussion in the section on General Medicine, may be in order. In view of the epidemic of yellow fever which prevailed in our country during the year 1905, quite a number of the members of the Society no doubt have considered that disease the logical subject of discussion in the section on General Medicine at this time. There were two reasons why I did not select it as the subject for discussion. The first was I had had no personal experience with the disease, and therefore did not feel that I could inspire the confidence or properly lay the foundation necessary to an intelligent and profitable discussion of the subject. The second reason was I had been led to believe that that subject had been provided for in the special meeting of the Society which had been called for February 6, as it was announced that yellow fever would be made the subject for special consideration at that meeting. As is well known typhoid fever, tuberculosis and pneumonia head the mortality list in the United States, each of which carries off annually many times more victims than the widest spread epidemic of yellow fever of which we have any history. Tuberculosis having been the subject of discussion at the annual meeting of the Society in 1902, and pneumonia at the 1905 meeting, and having had considerable experience with typhoid fever, I thought there was no subject in which the profession and the public could be more vitally interested, I decided to make it the leading subject of discussion at this meeting. Notwithstanding it is claimed that typhoid fever is an easily preventable disease, it is steadily becoming more common and

widely disseminated, especially in the country districts, and the amount of suffering inflicted by it and the aggregate cost to the country are beyond computation. As the disease is not made a reportable one under the laws of but few (if any) of the States of the Union, there are no reliable statistics available on the subject. Any estimate as to the number of cases occurring in the United States annually, or even in our own State of Louisiana, as well as the number of deaths resulting therefrom, would be purely a matter of conjecture. In order that I might be fortified with more exact facts and figures I endeavored to procure such data bearing on the subject as would enable me to present it to the Society in a comprehensive and instructive manner, but was utterly unable to do so because of the facts just stated. Typhoid fever was widely prevalent during the year 1905, and was epidemic in a number of larger cities of the country, notably in New York and Philadelphia, it was asserted by some of our Northern friends that there was more danger of contracting that disease in either of those cities than there was of contracting yellow fever in New Orleans at the height of her epidemic. Pittsburg has, for a long time, been considered an infected center from which typhoid fever is distributed, and there has scarcely been a year within the last decade without an epidemic of greater or less magnitude in that city, and for the past several months she has been grappling with one of the severest in her history. Typhoid fever was also prevalent in a number of the parishes of our own State during last year, and the Charity Hospital of the Crescent City did not escape, resulting, if my memory is not at fault, in two or three deaths among her nurses as against none from yellow fever. The disease is endemic in the United States, and, like the poor, is always with us, and every year witnesses more or less extensive epidemic outbreaks in different parts of the country, entailing an amount of suffering, loss of life, and expense every year, which, if the aggregate were known, would dwarf into insignificance the average epidemic of yellow fever, which latter is only of occasional occurrence. The typhoid infection seems to have been permanently domiciled for a number of years in cities like Chicago, Pittsburg, Philadelphia and others, and although Chicago now claims to have freed herself from that obloquy I predict she will yet have other epidemics. According to

the Health Commissioners' report for New York State, which I accidentally came across a few days ago, there were 25,000 cases of typhoid fever in that State during the year 1903, entailing an estimated moneyed loss in round numbers of \$10,000,000. From meagre statistics gleaned from the texts the deaths from typhoid fever during the last decade, in Philadelphia alone, have ranged practically from 400 to 1,000 annually, the latter number being considerably in excess, if I mistake not, of the total mortality from yellow fever in the entire fever zone of the United States during the visitation of 1905. Since the etiology of typhoid fever has been settled and the fact that we have the disease to reckon with in our midst is no longer disputed, I shall not consume time discussing those points, but shall devote what I shall further have to say on the subject mainly to the modes of conveyance of the infection and the measures necessary to effective prophylaxis. For a long time I have believed that the theory and teaching concerning the transmission of typhoid infection should be remodeled and revised. The heretofore universally accepted theory that an infected water supply is almost alone responsible for the epidemics of typhoid fever occurring in different parts of our country is one fraught with great danger to every community in which such epidemics occur. In the light of our present knowledge on the subject we still have to admit that water infection is a frequent, if not the most frequent, starting point of epidemics, but that it is the source alone by which they spread and are kept alive can, I think, no longer be sustained. A careful study of the epidemiology of the disease should convince any thinking and logical mind that there are other factors which should be taken into consideration in the study of epidemics. The Plymouth, Ithaca and Butler epidemics in this country, and that of Maidstone in England, have been cited as the most striking examples of water epidemics in recent years, but in those I believe there were other active factors without which they would never have reached the magnitude they did. Many local outbreaks, such as house epidemics, have occurred in which water infection could be excluded with almost positive certainty, some of which I think have come under my own observation, and to which I may have occasion to refer later. We must admit that it is not always an easy matter to trace the source of every case or epidemic of typhoid fever, but it is safe to conclude that the time has come when we shall have to

look beyond the water we drink for the propagation and spread of the disease in our midst. Typhoid fever has long been known to be the scourge of armies, as was shown by our own Civil War, the war with Spain and the South African War, in which personal contact was clearly proven to have played the chief part in the dissemination of the infection. The promiscuous intermingling of soldiers in camps, where a number frequently occupy the same tent, sleeping it may be with already infected clothing on, with the general unsanitary environments which often obtain, furnish all the conditions favorable to the spread of the disease by contact. Dr. Vaughn, who had an extensive experience and studied the epidemiology of the disease carefully during the Spanish-American War, reached the conclusion that personal contact was responsible for at least 66 per cent. of the cases of typhoid fever occurring among the United States troops during that eventful period.

The Government Commission, which also studied the disease during the same period, reported that infected water was not an important factor in the spread of typhoid fever in the national encampments, but that the chief agent in the dissemination of the disease was contact. Koch, the renowned German bacteriologist, several years ago declared his belief in the transmission of typhoid fever either directly or indirectly from one person to another. And in that country where the epidemiology of the disease has been studied systematically by the Government, they have been able to trace the course of epidemics from house to house and village to village by the routes of personal contact, independent of any connection with the water supply. The known channels of indirect transmission are many, and I suspect others remain to be discovered. The three F's, fingers, food and flies, are believed to be especially dangerous as carriers of infection. It is easy to understand how the fingers of nurses and others handling those sick with typhoid fever may carry the infection not only to themselves, but to third persons and other agents as well, each of which may in turn become a source by which the disease is disseminated. Of course the danger of both food and water becoming infected from every case of typhoid fever is understood and admitted.

The irrepressible house fly is now known to be an active agent in the spread of typhoid fever, and I have thought it was not impossible that the bacillus might undergo certain evolutionary

changes in the body of that insect by which it gathered pathogenic force, something after the manner of malaria and yellow fever in the mosquito. Fleas and bedbugs are also believed to be capable of carrying the infection. Finally there is good reason to believe that the infection may be transported by fomites and the disease become epidemic long distances from its point of origin. At least one such epidemic has been reported to have occurred in England a short time after the close of the South African War, due to a lot of old army supplies brought from the scene of action where the disease was known to have been very prevalent during that bloody struggle. Another instance in point came under my own observation but a few months ago, in which a lady residing in Texas visited her parents in Arcadia, Louisiana, a month or two after herself and one of her children had recovered from typhoid fever, and after spending several weeks with her parents she visited a sister living about thirty-five miles distant; in a few weeks typhoid fever developed in both her parents and the sisters' families, and I was in a position to know that there had never before been a case of the fever on the parents' premises or in the neighborhood, nor was it known that any member of the family had been exposed to the infection, and I was told the same was true of the sisters' family.

The prophylaxis of typhoid fever in its broadest sense embraces the measures necessary to the prevention of the disease and those necessary to arrest its spread when it has made its appearance in a given community. Epidemics are usually ascribed to a violation of the fundamental principles of rational sanitation, whereby the water supply and other channels of distribution become infected. Prevention is best accomplished by maintaining the general hygienic conditions on as high a plane of perfection as possible, having a careful regard for the disposition of the excreta of those suffering from typhoid fever, and of preventing contact between them and the public. The people should be taught to know that every case of typhoid fever is a menace to the health of the community in which it occurs. To prevent the spread of the disease everybody admits the importance of thoroughly disinfecting the stools and the urine, and in my own opinion the disinfection of clothing, bedding and everything that comes in contact with the patient is not of secondary importance. The effectiveness of this depends on the

manner in which it is done. The chemical disinfectants usually employed, such as carbolic acid, bichloride of mercury and the proprietary preparations, I believe to be unreliable and unsafe, because they cannot be used in sufficiently concentrated form (with safety) to be effective. There is nothing comparable to heat, either dry or moist, as a destroyer of pathogenic germs of any kind, and I have adopted the habit of having boiling water poured into the bedpan with the stools and urine as soon as they are passed, and allow it to stand until the pan is needed again. I usually advise that two vessels be kept, in order to avoid having to empty too soon after the boiling water has been added. I also have a little slaked lime kept in the bottom of the vessels, and the stools and urine are allowed to be passed on it. Finally I have a hole a foot or two deep dug in some remote part of the yard into which the feces and urine are at last emptied, and once or twice a day some coal oil is poured into it, and a match applied, when it will burn for quite a long time, and thus a degree of heat is produced which the lurking germs cannot withstand. I make it a point to see that the pot is kept boiling at every place where I have a case of typhoid fever, and every day the patient's clothing and bed linen are changed and immediately subjected to the boiling process. The precaution is also taken of having the drinking water boiled, and being convinced of the spread of typhoid fever by direct contact I endeavor to maintain as complete a system of isolation and non-intercourse as possible in the management of every case under my care, all visitors are prohibited and no one is permitted to enter the room except the nurse. I believe this to be just as essential as in smallpox or any of the directly contagious diseases, and without which all other efforts at prophylaxis will be more or less a failure. The disinfection of the stools and urine should be continued for several weeks after the patient has recovered, and when he is finally permitted to mix again with the public it should be seen, too, that he goes with non-infected clothing and a clean bill of health.

Errors of diagnosis, growing out of the variations in type and the clinical manifestations of typhoid fever, are probably responsible in no small degree for the increase and spread of the disease in our country. In conclusion I would suggest that typhoid fever should be classed as being both contagious and infectious, and that legislation should be enacted whereby physicians should be required to

report all cases coming under their care to the proper health authorities, to the end that we may be enabled to procure reliable statistics on the subject and be in a position to study the disease more scientifically and thus limit its spread. I hope to hear something on treatment from those appointed to open the discussion, and others who may have papers on the subject.

DISCUSSION.

DR. HAMILTON P. JONES, in opening the discussion, said:

In opening the discussion on this most important subject, "Typhoid Fever," I am seriously handicapped by an almost complete absence of any data or statistics that will even give me the least idea of the extent of prevalence of this disease throughout our State.

Nobody knows, even approximately, the total number of deaths from this disease in this State, much less the mortality rate or total number of cases each year.

That the disease is fairly prevalent in Louisiana is amply attested to by the various and numerous communities outside of New Orleans, from which more than one-half of the cases reported by our City Board of Health can be traced, and it is an unwarrantable disgrace that we must be in this position of discussing an important disease in our midst, the extent of which we know practically nothing.

This absence of knowledge is not alone confined to typhoid, but is true as to smallpox, diphtheria, scarlet fever, consumption and all other disease with, perhaps, the exception of yellow fever. In fact we do not accurately know how many people even die in this State a year, or are born. In other words, we have no vital statistics worthy of the name, and, while I fully appreciate the importance of the work and its absolute necessity, I think that, in order to keep up with the demands of the community and the advancing times, our State Board of Health should not alone be known as a Quarantining Board or a Yellow Fever Board, but should, besides caring for other communicable disease, keep its vital statistics as perfectly as they are kept anywhere.

I know that they are not kept, because the health officers of the various parishes do not furnish them, and they in turn do not, in

all cases, get the data from the practitioners in their parishes, and I hope sincerely that you will see to it that our Legislature at this session will pass such laws with such penalties attached, which will not only make it obligatory on the State Board to gather vital statistics, but also to make it possible to enforce their collection.

In the absence of data I have determined to draw your attention to conditions as they are in New Orleans today; what we propose to do in the way of bettering our water supply, and also show you why water from the Mississippi will be used rather than from any other available source; show you maps of these sources and also of the distribution of cases of typhoid in New Orleans and the difficulties of tracing their origin, and the probability of the great role played by milk in the dissemination of this disease in our city.

As you will see by the map, the watersheds of all the available sources of water supply, other than the Mississippi, are more or less populated, and while the three examinations of the water from these sources, made by our Sewerage & Water Board, did not show the presence of colon bacilli, the tests were not fair ones, and there is strong reason to believe that these streams are constantly liable to contamination from the always present cases of fever on their sheds. Of course, any cases able to contaminate these sources of water supply are also capable of giving rise to other cases on the watershed itself, which brings us right to a consideration of our country domestic water supply and its great liability to contamination by the surrounding surface and subsoil drainage from all sources.

It will be well to discuss the best method of rendering these various domestic supplies wholesome. I do not think that any method I know of equals in absolute safety that of boiling all water used for drinking, culinary purposes and the cleansing of all containers of food, especially is this true for milk cans. It was a question of initial cost, however, that caused the selection of the Mississippi as a source of our proposed supply, as all available sources would require the same treatment, namely, coagulation and filtration; the cost of bringing the water from north of Lake Pontchartrain to the pumping plant alone equaling the complete installation of filter plant and distribution system for the river supply. However, it is worthy of note that a series of bacteriological tests, made

at the Audubon Experimental Plant of the Sewerage & Water Board for 365 consecutive days, showed the presence of colon bacilli only three times on three consecutive days, and this contamination is supposed to have come from a quarter-boat moored only a few feet from the intake. Properly filtered Mississippi River water seems to be as safe a water as can be gotten anywhere.

New Orleans itself presents today a most complicated problem in tracing any case or series of cases of typhoid, in that nearly every house has its separate water supply, and it is well known that unless the environment of the typhoid germ be favorable to its nourishment and growth it quickly dies, say, in less than a week. So that in the great majority of cases examinations are made too late, and as a result are negative, thus obscuring the source of infection and rendering conclusions difficult. As all of our cisterns are practically submitted to the same general condition of drouth and rain, and typhoid fever is not a serious item in our health account—336 cases in 1904, 335 cases in 1905 and 39 cases so far this year, widely distributed as you see by maps, about half of which originated outside of the city—we must look to some other source than rain water, and while the bacteriological findings of our City Board of Health do not support the idea, it is my belief that our milk supply is largely responsible, contaminated by dirty water used in washing cans and utensils. Vegetables washed in contaminated water are also dangerous, and flies probably play an important part.

After the establishment of a uniform supply of water all these matters can be more accurately looked into and determined. The outlook for New Orleans is indeed cheerful from a commercial standpoint, and with the disappearance of the cisterns and the cesspools, and the advent of sewerage and drainage, giving us probably dry gutters and a lowered subsoil water level, and an abundant supply of pure, clear, filtered river water, New Orleans will be second to no city in the Union for healthfulness.

DR. A. F. BARROW: I do not like to allow this occasion to pass without making some remarks showing my appreciation to Dr. Thornhill for the manner in which he has presented the subject. Neither Dr. Thornhill nor Dr. Jones, in his discussion, touched upon the question of treatment. I suspect that they did not touch upon it because they realized, as we all realize, that it is still an

open question as to how to treat typhoid fever. I do not think that any treatment has ever proved entirely successful. I do not think any one can claim to have an antidote to typhoid fever. There are some who think they can abort the disease; I think they are too enthusiastic. I do not know but that the course of the disease can be shortened by treatment. I consider one of the best things absolute rest on the part of the patient. The patient must be required to refrain from any physical exertion. This theory is favored by some and opposed by others; some claim that they ought to be kept up; some claim that they ought to be kept on full diet. I think that is erroneous. I think the diet should be of the easiest kind to digest. So far as medicine is concerned I do not know of any medicine that would have any influence, except such as used to sustain the vital powers of our patients and keep them becoming broken-down from ravages of the disease. There is one question which we all overlooked, that is the value of water. I believe we come nearer having a beneficial agent for the treatment of all diseases, and especially this disease, without any actual stimulation to the system, in the use of water. Of course you all know the importance of getting a patient to drink water. He thinks that it is not necessary. It is very easy to get the patient to take water if you will put some imaginary property into the water. Some one is now putting out acetozone, and I do not think that is of any value except to make the patient drink water. It strengthens the patient to give a little strychnin, if he needs it, and possibly a little iodid, and that is about all we can do. I would like to hear this paper very thoroughly discussed. In my country we do not have typhoid, except as a very rare condition.

DR. NEWTON: This paper is a strong and good paper on the subject of typhoid fever. The question of typhoid fever is a very interesting one to me, because typhoid fever has been my Waterloo. It is a subject which is of vital interest I believe to every physician. It is a condition with which we are all confronted. I believe we have it in every hamlet of the country. How are you going to diagnose typhoid fever is a very important question. It is getting to be a question of greater importance because of its increasing frequency. It is true that, after a certain more or less definite time, the agglutination test, Wiedal reaction, etc., will usually admit of typhoid diagnosis, but where is the physician that can, from

clinical observation, say this is typhoid and that is not typhoid fever. There is the question. Individually I strongly believe that all these so-called slow fevers are typhoid, but I cannot prove it. We need something else beside treatment. We need diagnosis. Then we will be able to go into the treatment intelligently. The distinguished speaker who has just preceded me speaks of administering large quantities of water. We know that our patients almost constantly suffer from diarrhea, and that as peristalsis starts from the stomach we easily see the necessity at that stage to limit fluids. In the presence of this complication water by the stomach must be limited. Where is the physician that will add to the diarrhea by putting anything into the stomach except nutrition and water in very small quantities? I am not saying that in a spirit of criticism. I have lost more cases of typhoid than I have lost from any other disease. In regard to the treatment I think it is simply a question of holding up the vitality. We are all making a mistake by giving strychnin and nitroglycerin. Why? Because the vitality does not need it. You only spur it up. It is only a whip. It is a question I would like to hear discussed by every man in the house. Let us look into it and see what we are dealing with. I do not know whether mention was made of a house fly as a means of disseminating this disease, but that should be considered. We should also use the greatest care in disposing of feces and urine, and everything that is around the patient. I am glad he presented this paper. I want to compliment him on it. It is a strong and a good paper. I think you can spend all of this day on this paper, discussing the subject of typhoid fever and you would be using valuable time to a good purpose.

DR. J. A. STORCK: Speaking of the remarks made about acetozone. I have had some little experience with this myself. It deodorizes the feces in forty-eight hours, and seemed in several cases to have aborted typhoid fever. I am afraid that he has laid a little too much stress on the water given in acetozone. My practice was to dissolve thirty grains in a half gallon of water and have the patient take it in twenty-four hours, drinking it instead of the regular boiled water. I think that the cases so treated did better than the cases treated without it. I am sure that the cases made a better recovery and quicker convalescence under this treatment than they did under any plan of treatment I have ever followed.

DR. FAULK: I treated one case with acetozone. It was a typical case of typhoid and lasted about twenty-eight days. Scarcely any other medicine was used, and it was diluted as Dr. Storck has mentioned. Hydrotherapy was used to control the temperature. No antipyretics were given. As to the use of water, I encourage the patient to drink enough, but not to distend the bowels. Now as to nourishment there are two preparations that I have used in nourishing typhoid fever patients: panopeptone, and milk peptonized with peptogenic milk powder. They have given me a great deal of satisfaction. As to the source of typhoid fever, there is a paper written by Dr. T. P. Barringer, formerly chairman of the faculty of the University of Virginia, calling attention to the fact that railroad beds might be a source of infection. Traveling cases of typhoid fever discharge their excreta along the railroad bed, and in that way the railroad beds become infected, and from year to year are sources of infection.

DR. E. LEE HENRY: Acetozone in 36 to 48 hours deodorizes the feces and the amount of water taken increases the secretion from the kidneys and our patients void a much greater quantity of urine. I usually give my patients about one-half gallon acetozone mixture every 24 hours, and at the end of the first 36 hours the temperature begins to decline, and after that I rarely have to resort to sponging to reduce temperature. Always keep mixture on ice, and if stomach is disturbed add a few drops of lemon or orange juice. Have had quite a bit of experience with typhoid fever, and must say that I have had better results from this than from any drug that I have used.

DR. BASS: So far as I know I am the first man in the last few years who was willing to use or champion the treatment with castor oil, reporting about seventy-eight cases in all. I look upon typhoid fever as being due to a specific bacillus which is chiefly found in the lymphatic glands, the mesenteric glands and lymph tissue. One of the questions presented in the consideration of the use of antiseptics is this: that even if we have destroyed all of the bacteria in the intestinal canal we still have the toxemia, which seems to be the cause of the elevation of the temperature. The temperature seems to be due to the absorption of material from the intestinal canal, whether it is toxemia arising from undigested food or bac-

teria growth, I am not certain. Almost any purgative is followed by a drop in the temperature. Perhaps, however, there would be exceptions in certain cases. I have treated seventy-eight cases with castor oil and nothing else, except as much water as I could get them to drink, which I imagine had no effect except in eliminating the toxins by the kidney. The administration of castor oil was certainly followed by a drop of temperature. If the temperature is increased—is elevated by absorption of material in the intestinal canal—that is formed by the bacterial growth or undigested food. If that is moved off typhoid does not occur. Anything that will encourage the elimination of the toxins that are circulating in the blood ought to be given freely. Water does that the best of any thing I can imagine.

Now, as to the question of routine of treatment, I think we ought to give at least two doses of castor oil during the twenty-four hours, not particularly for diarrhea, but notwithstanding diarrhea and regardless of any other conditions. This ought to be carried on to the end or to a complete convalescence. The doses will usually vary considerably with the course of the disease. The first week usually requires a large dose. The next two weeks a smaller dose, because there is a tendency to diarrhea, then the latter part of the disease a larger dose again. My experience covers seventy-eight cases, and two deaths out of that number. I understand, of course, that statistically this would not be worth much, but it is worth something. My experience has been such that I put every case, without question, on castor oil and on castor oil alone, with the exception of water and food.

DR. J. J. ARCHINARD: Answering the question raised by Dr. Newton regarding diagnosis, I would state to the doctor that the Louisiana State Board of Health supplies to the physicians slides by which they can make an examination of the blood of the typhoid fever patients. I admit that perhaps sometimes the reaction will not take place, but in fifty thousand cases the failure has only been in five per cent. of the cases.

The question was asked how many days before the reaction could be had?

DR. ARCHINARD: Usually you can get the reaction after the third day, though sometimes we do not get it until the sixth day.

DR. FAULK inquired of Dr. Archinard whether the giving of medicine at any time interferes with the Widal reaction.

DR ARCHINARD replied that it did not.

DR. LAZARO: Typhoid fever being on the increase, is a subject of great interest. I have had a great deal of experience with this disease and have been very successful. I will outline my general treatment: Complete rest in bed, room cheerful, quiet and well ventilated; plenty of water internally, frequent changing of body and bed clothes, sponging with tepid water and alcohol; broth and milk diet; as little medicine as possible. In the beginning one dose of calomel, followed by salts or castor oil, followed by antiseptics. I prefer Bartholow's mixture of carbolic acid and camphor. Tincture of iodine three times a day. About four years ago I added acetozone, which I give every two hours with water and lemon juice. Some claim that its good effect is due to the frequent drinking of water. I believe that it has pronounced antiseptic properties. As a stimulant, good whisky. When a case is diagnosed early and put on this line of treatment complications seldom develop. When they do develop, they have their special treatment, which I will not touch. In the cases in which there is a tendency to diarrhea, sulpho-carbolate of zinc has given me very good results. For tympanitis, with a red and dry tongue, I have tried nothing better than our oldtime turpentine and salol. I will add a word concerning quinin. This drug I have given throughout typhoid, from 1894 to 1900; since then I have discarded it altogether, after having made a positive diagnosis, and my patients get along much better without it.

DR. THORNHILL, in closing: "I shall not attempt to review all that has been said and cannot remember all that has been said, but in the main I think we all agree as to the essential points. I agree thoroughly with Dr. Jones in all that he says, and I agree in the main with Dr. Barrow in all that he says, except as to the value of acetozone; but my experience with that drug has been very limited—limited to one case, and that case died promptly. The mode of administration makes it too bulky and cumbersome for the stomach of the average fever patient, and I believe that the same amount of pure water would do as well, and the patient would take it much more readily. The basis of all successful treat-

ment can be compressed into the two words—rest and diet—and I want to say that I believe patients need a great deal of rest and but very little diet. I should not like to place myself on record as advocating what may be termed a Tanner bill of fare in every case of typhoid fever, but, as compared with the injudicious over-feeding that obtains in a large number of cases, it would, in my opinion, be infinitely better. Some one has said (and I believe with a very considerable amount of truth) that water is the natural physiological food of typhoid fever patients, at least for the first two or three weeks of the disease. I believe that a majority of the complications occurring in typhoid fever are due more to errors in diet and overfeeding than to any other one cause. I had expected to say but little, if anything, on the subject of treatment. It has been said that drugs are not worth very much in the treatment of typhoid fever, and I admit that there is no specific, but I am impressed that there is one drug which exerts a very marked influence over the course of the disease and that is the arsenite of copper. Typhoid fever has been a specially interesting study to me for the past twenty-five years and, so far as I know, I was among the very first in the State to declare over my own signature that the continued fevers of Louisiana were typhoid. If you will refer to the *NEW ORLEANS MEDICAL AND SURGICAL JOURNAL* for September, 1886, you will find an article by me in which I declared that the continued fevers of Louisiana, about which there was so much controversy and difference of opinion at that time, were typhoid. In reply to Dr. Newton's criticism that the house fly had not been mentioned as a factor in the transmission of typhoid fever, I want to say that I laid special stress upon that point. I cannot remember all that has been said on the subject, but I think that on all the essential points there is no very great difference of opinion. With reference to the Widal test I wish to say that I believe when the clinical symptoms are correctly interpreted they will be found to correspond pretty uniformly to that test. As Dr. Archinard knows, I have been sending specimens of blood to them for examination for the past ten or fifteen years, and without a single exception, where I had made a diagnosis of typhoid, that test bore out my diagnosis."

DR. NEWTON asked Dr. Thornhill what per cent. of continued fevers he considered as being typhoid.

DR. THORNHILL replied: "I believe that every fever that successfully resists quinin for eight or ten days is typhoid, unless there is some other obvious pathological condition to account for it."

A paper by DR. E. M. DUPAQUIER, entitled *How to Meet the Symptoms Tympany and Colitis in Typhoid Fever*, was read by title by the Secretary.

DR. JOSEPH ATKINSON read a paper entitled,

The Anomalies of Typhoid Fever.

I am afraid the printer has made the title of this contribution misleading. "The Anomalies of Typhoid Fever" may induce you to look for a general discussion of all the varieties of type of this disease. Nothing could be further from my purpose. The intention is to ask your consideration of some, only a few, of the departures from the classical clinical picture of this malady. In introducing the subject, and leading up to it, though not bearing directly upon it, the writer has taken the liberty to give expression to some thoughts which have been upon his mind for quite a while, but which he hopes may not be uninteresting or unprofitable. This will account for the apparent fragmentary character of the communication.

The solicitation of your chairman of the section of general medicine to contribute a paper at this meeting of the Society brings to mind an incident which transpired in my professional life not a great while ago.

I was treating an infirm, old member of the legal profession, whose creed was thought not to be very orthodox; indeed, he was of decidedly skeptical proclivities. At one of my visits he openly avowed himself an agnostic, to which I responded in the interrogatory: "Are you really an agnostic or just a plain ignoramus?"

After all that has been said and written upon the subject there was a question in my own mind whether my relation to the diagnosis and treatment of typhoid fever is that of an agnostic or simply that of an ignoramus. It may be inquired: "With such a conscious state of mind, how can you have the assurance to come before the

association with a paper on this theme?" The reply to this question will appear as my contribution proceeds.

While I have been engaged with the universal medical profession in the study of typhoid fever for the last decade, during which time great progress has been achieved, many difficult problems solved, and many facts elicited, still, such a mass of literature has been accumulated that judgment and discretion are required to sift the wheat from the chaff, to separate the good from the bad, to define with accuracy the position we occupy. The entire field has been so often traversed, the entire subject so thoroughly threshed out, there is danger of going over the same ground, of whipping old straw, yet the last word has not been said about this interesting topic. I have endeavored to avoid anything like a collision with other essayists by following the same line of thought. This I shall endeavor to obviate by discussing anomalous cases of typhoid fever, and with a few remarks upon its dietetics I shall close.

Confessed ignorance is always a source of chagrin and embarrassment to intelligent gentlemen. We must acknowledge there are many mysteries connected with this subject. We have no idea why the period of incubation varies so greatly in different cases and in different epidemics, nor can we tell why some patients succumb so readily, while others, seemingly less rugged, sometimes recover from symptoms more alarming without untoward incident. Other members may doubtless go into the details of the etiology, mode of conveyance, different principles and methods of treatment of typhoid fever. Be it our humble mission to deduce a few lessons from our experience in this disease.

It is not the easily successful man who becomes a leader of thought and of men, but the man with a purpose, who grips his intention all the more tightly when rebuffed, who does not hold himself defeated because of his being baffled, who, for the sake of the future, forgets the past and treasures the present. He is the man who will make his life tell and prove himself the real helper of his brother, the genuine benefactor.

Apparently successful treatment of serious cases of illness have the knack of, somehow, creeping into print, when they are heralded abroad with great eclat to a world of readers. But do you know,

my brethren, I admire the moral heroism of the physician whose manhood leads him to chronicle his failures; give the fraternity an account of his cases which eventuated disastrously, that his mistakes, his errors of judgment, his misconceptions, may serve as beacon lights along the shore of medical and scientific progress, to warn them from the rocks and shoals upon which he has been cast, if not totally wrecked. It is said that three of the hardest words in the English language for one, especially a doctor, to utter, are: "*I am wrong*," and it may be justly added that three of the most sublime words which can be spoken are, "*I seek light*." An individual who does not realize his weakness and his incompetence is not likely to undertake to better his condition by applying to the sources of power and education. Let us profit by our past experiences, making stepping stones of our dead selves, mount up to something higher and better.

It is said of that great general, whom we all admired and praised while alive, and whom every true son of the South delights to revere and honor, he never appeared so grand as when forced, by overwhelming numbers, to surrender at Appomattox.

After these prefatory remarks we proceed at once to the matter in hand.

From what has already been said you will not be surprised at what shall follow. Your indulgence is bespoken in overlooking any want of uniformity of thought or other want of conformity to the rules of rhetorical composition.

I am afraid that you have already concluded that my paper is like the old woman's "*hotch-potch pie*," composed of "fish, flesh and fowl." Our aim is to be eminently practical in our object search after truth. Our destiny is not in our circumstances or station, but in our attitude towards truth and scientific accuracy. Traces, glimpses of light are vouchsafed to us to encourage and guide us in our search for more. The observing practitioner profits by his cases in practice. I belong to the despised sect known, in derision, as Methodists, and you know they are always telling their experiences, even though it be not very creditable to them.

Typhoid fever does not imitate other diseases, but other diseases simulate typhoid fever, says one writer. To this I cannot agree. Our observation is not corroborative of this generalization, as will appear as we proceed.

First, I would disabuse your mind of the usually accepted theory of the insidious nature of the onset of this fever. On the contrary, you will not infrequently encounter cases, the suddenness and violence of whose accession will suggest acrid poisoning. I was called to see the wife of a dentist of our town and found her suffering with intense pain in the head and excessive restlessness, jactitation, aching in the bones, with nausea and vomiting of biliary matter. Such was the acuteness of the attack, so intense the symptoms, I was forced to resort to the administration of hypodermatics of morphin and atropia to allay her sufferings. Her temperature, at this, my first visit, was 104. I very naturally expected a case of malarial fever and prescribed the initial mercurial purgative, which brought away several bilious stools. The symptoms being only partially mitigated the pain kept up, and I was soon persuaded, after giving quinin freely for diagnostic purposes, that I had a genuine case of typhoid fever to contend with. In the latter part of the first week, I had hardly reached home from a visit to her when a message reached me to return in immediate haste. As soon as I placed my hand on her pulse I suspected what had happened. On taking the temperature the sudden drop confirmed my fears, which I communicated to the husband. He replied, "We have seen no discharge of blood." I replied, "You will see it." She, not long afterwards, called feebly for the bedpan and nearly or quite filled it with dark coagula of very offensive blood, and, notwithstanding the prompt and energetic employment of restoratives and other measures usually resorted to in such cases, she died in a few hours.

On November 13, 1905, I was engaged to treat Miss O., age, 13 years. Found her with typical clinical picture of typhoid fever, which ran a smooth even course of average severity, lasting, however, about five weeks. After she had been sick about three weeks, her father, a minister of the gospel, began complaining with a pain in his hip, but kept about for several days. On the following Sabbath he drove twelve miles in the country and preached, returning home the evening of the same day. His wife asked me to prescribe for him, and, as he had some temperature and the bowels had not acted that day, I directed a mild mercurial purge. The next morning, the bowels not having responded, I

ordered a saline cathartic. As this failed to produce the desired result he got an enema of hot, soapy water. When this operated I was called, and his wife, in some perturbation, said, "Doctor, he has had a hemorrhage from the bowels." As my examination did not disclose the usual constitutional signs of a hemorrhage, I called for the glass to inspect the motion from the bowels. She replied it had been thrown out. I inquired how much blood it contained. She said about my hand full. I asked the patient if he had ever suffered from hemorrhoids, to which he replied in the negative. I applied ice to the abdomen, and administered some small doses of acetate of lead with opium. Under this and some stimulants he expressed himself as much relieved. I had him on iodine emulsion, alternated with dilute phosphoric acid and tr. of iron in syrup of orange peel as a vehicle. He was kept as quiet as possible, taking liquid peptonoids, a tablespoonful every four hours, as nourishment. Just one week from the day he took to his bed I received an urgent 'phone message to come at once. Upon my arrival I found that he had had, a few moments before, an alarming hemorrhage, the bedpan being literally filled with dark coagula, with quite a quantity of fluid blood. In spite of stimulants and hypodermics of strychnia, good sized doses of turpentine, with opium and lead, with adrenalin chlorid intervening between the other remedies, the bleeding continued and he died that night, the blood continuing to ooze from the anus even after he had been dead for some time. You will recall the fact that this man had a hemorrhage on the first day that he took to his bed, and succumbed to another, one week from that date.

Dr. H. Rogers, one of the physicians in the hospital at Aubertiersville, relates an account of several cases brought into his wards, the interpretations of whose symptoms appeared incredibly difficult. The extreme cephalalgia, painful meteorism, diarrhea, deep prostration, looked in the direction of typhoid fever, but the suddenness of the accession, the rapid evolution, the premature, precocious eruption of the lenticular spots, the incontinence of urine and feces, seemed incompatible with such a diagnosis. Several of these cases terminated fatally within from four to eight days. The temperature in two of them reached 106 and 108 in a short while. The post mortem findings corroborated the suspicion of typhoid

fever, the usual lesions of enteric fever being found. Upon going through the literature of this malady quite a number of cases similar to these will be found. The protracted period of invasion is wanting, the infection manifesting itself without warning, sometimes accompanied by rigors and convulsions. The disorder assumes an unwonted serious aspect from the beginning. The nervous system being greatly affected, prostration is extreme. The early appearance and rapid extension of the rose-colored eruption gave a somewhat special character to the evolution of the cases. All writers agree that the typhoid eruption becomes visible in the end of the first or the beginning of the second week. They were observed in the cases referred to as early as the second or third day. The statistics of the Leipsic and Hamburg hospitals disclose quite a number of similar cases. One given by Murchison shows even a quicker evolution; a girl, nine years of age, whose father was ill of typhoid fever, was suddenly seized with vomiting and diarrhea, fever with violent pain in the head. In forty-seven hours she was dead, and the necropsy disclosed a hypertrophic condition of the mesenteric nodes and infiltration of Peyer's patches and solitary follicles. In these fulminant cases, post-mortem showings vary considerably, and warrant their division into two distinct groups. At one time intoxication predominates, rapid and profound, at another the morbid process is hurried; symptoms and lesions affect a rapidity of succession, justifying the distinction of *galloping typhoid*. The poisons produced by typhoid bacilli are of two kinds; one spreads through the entire system producing a reaction of a general nature; the other, connected with the pathogenic agent itself, has a destructive action at the point at which the microbes develop. When the destructive toxins are particularly active or abundant, the symptoms, both general and local, follow each other in quick succession, and the case, hurrying over its different stages, moves forward with rapid bounds and hastens to a fatal ending in an incredibly short time.

We have been so accustomed to look for tedious prodromata and prolonged period of malaise in typhoid fever, we are abashed when called upon to face one of these violent attacks, which progress to an inevitably mortal termination, often within the brief period of a few days only. In keeping with the purpose of this com-

munication, to include points not touched upon by others, we desire to say a word on treatment and dietetics, and then proceed to close.

Referring to hemorrhage: The evacuations should be subjected to constant inspection, for often clots and sloughs may be detected antecedent to the outburst of bleeding when turpentine in heroic doses may be administered, the diet revised, and in this way a serious loss of blood be obviated. Thirty drops of adrenalin chlorid 1-1000 may be given, to be repeated within three hours. Cornurtin is a powerful hemostatic, but raises blood pressure. The dose is 1-6 to 1-4 of a grain in the course of a day, in divided portions. The hydrochlorid is a more soluble preparation than the alkaloid while the dose is identical. Astringents are found to be of little service. Calcium chlorid is recommended by some writers in the series of Practical Medicine for 1904.

A suggestion as to feeding and we are done:

The diet of a typhoid case should comprise the following requisites: It should be fluid, easily digested, readily absorbed, without solid residue, and not putrefiable. It ought to contain the requisite ingredients in suitable proportion, and last, but not least, should be palatable. Milk does not satisfy these conditions, or does so very imperfectly. I have always differed from my professional brethren in the common unstinted use of plain sweet milk as the usual and almost only article of diet in fevers, and especially in typhoid. Milk, from a dietetic standpoint, is not a liquid food, for no sooner does it enter the stomach than it is solidified by the milk curdling element, the lab. ferment of the Germans, with which it comes in contact. The habit of considering milk as a fluid food has been the cause of much abuse in its administration. A sudden rise in temperature, accompanied by restlessness, tympany and abdominal pain, supplies a warning sign due to the ingesting of too much milk. An examination of the stools, or a washing out of the bowels, reveals the presence of numerous casein curds, which explain the temporary relapse or backset of a case that had been considered doing very well. Sometimes the patient is drowsy or restless, his fever going higher, all the symptoms looking more grave—all at once he vomits a quantity of tough curds, and almost immediately becomes quiet, with a declining temperature and soft

skin, and drops into a refreshing nap. All the threatening symptoms subside with the ejection of the offending mass. The effect that this undigested material would have upon an ulcerated bowel is too obvious to require discussion. A distinguished chemist once said to Dr. Hare: "Do not forget that milk contains as much solid matter as a full sized mutton chop"—and solid the milk must be before it can be digested—and yet I have known a patient gulp down more than two quarts of milk within twenty-four hours, that is, solid food equivalent to four good-sized mutton chops, and be surprised that his condition became aggravated. Can such a quantity of solid food be digested, and, if it could, can such an amount of food be good for a patient suffering with typhoid fever?

All pastoral people who have to live exclusively on milk, as the Bedouins and Tartars, have found out that the stomach must be spared the curdling of milk, else there will not be enough gastric juice left to complete the digestion of the precipitated casein, which, moreover, if precipitated in the stomach, will be in too large and too solid masses. It is for this reason that they ferment their milk before drinking. But what shall we substitute for milk in feeding our typhoid patients? Many other articles of diet are available besides milk. Among these we would mention gelatin, an albumen-sparing substance. In other words, the amount of albuminous food necessary to maintain our bodies in a state of nutritive equilibrium is lessened by the ingestion of a certain amount of albumen. This albumen-sparing property of gelatin renders it a most appropriate food in febrile conditions, in which there is excessive destruction of the albumen of the body, and it is best administered in the form of peptonized milk jelly, which consists of peptonized milk with a certain amount of gelatine added. It may be sweetened and flavored with orange, lemon, wine or rum, and taken cold. Notice the milk is to be *peptonized*. If milk is relied on as the chief diet it must be diluted with lime water or skimmed, or even given in the form of whey, and the quantity restricted to not over two quarts in twenty-four hours. Beef juice, or beef peptone, liquid peptonoids, chicken or mutton broth, soft eggs, milk diluted with two to five parts of coffee, cocoa, egg white, furnish quite a sufficiency of latitude and variety, which may, if desired, be enlarged by the addition of kumiss, butter-

milk, junket, raw oyster, iced tea and consommé, with, unless there be diarrhea, strained fruit juices, which may be resorted to for the purpose of varying the monotony of diet. Mosquiras' beef meal, and panopeptone are very good. Speaking of milk, we would not be misunderstood. It is the tendency to *overfeeding* with undiluted sweet milk of questionable quality to which we protest. It can be made more agreeable by putting it in a bottle with an equal quantity of sterile water and aerating by agitation. The addition of a teaspoonful of the white of egg, a trifle salt and a little sugar makes an appetizing "shake," which is improved by adding one of the fruit juices or clam broth.

Malted milk and similar preparations are useful foods.

Now, gentlemen, if I have added anything to the variety of this symposium, and been able, from my view-point, to throw additional light upon this scourge, I shall feel amply rewarded for any trouble of investigation and thought it may have cost. Inviting critical comment, and soliciting, at the same time, your indulgence for imperfections, I am yours for service.

DISCUSSION.

DR. LEBEUF: I believe there is some danger in the milk diet in these cases. A substitute I believe is chicken water. When the stomach is so very weak that it will retain nothing else it will retain that. It is a sort of a tea when made correctly, and is good for patients having the black vomit in yellow fever, and in typhoid fever.

DR. KING: I simply want to mention one of those anomalous cases we come in contact with. This was a tall gentleman weighing about two hundred and fifty pounds. He complained of a pain in his bladder. I thought, of course, that it was a case of acute cystitis. The method I employed to relieve him was rather unique. I applied a hot water bag to his abdomen, also tried morphin, but did not get the desired effect. I simply introduced a double catheter and used possibly four or five gallons of warm water. I worked with him for an hour and a half. The relief was permanent. He had no more trouble with his bladder. He developed a typical case of typhoid, lasting twenty-one days. One of the best things in the line of treatment is a good nurse, another

thing is proper diet. We have heard a good deal about acetazone water, castor oil, and some other things, but I do not think we pay enough attention to the diet in typhoid fever. This paper has appealed to me considerably in that regard. As a student in Charity Hospital it always struck me that we gave too much milk in typhoid. I believe we will get better results if we do not use milk. Now another thing in regard to diet. While the diet may not seem extensive enough, I think that is largely due to the physician himself. I believe he does not take enough interest in showing the people or the nurse how to prepare the food. It is marvelous the amount of ignorance displayed in the preparation of the proper diet for typhoid fever. It is also wonderful how ignorant some of the trained nurses are, in not knowing how to prepare it. I have found it a good plan to go into the kitchen and show them how to do it. I have never had occasion to regret going into the kitchen and showing them how to do it when they did not know. I propose to keep it up, and expect to get better results by it.

DR. MARCOUR: I think that very often errors are made in the diagnosis of typhoid fever. I had occasion to treat a case of diarrhea with remittent fever, and I had to leave, and transferred the case to another physician. In the meantime one of the most eminent physicians in the City of New Orleans was called into consultation. He thought it possibly a condition following dysentery. Examination to establish this was negative. Blood test for typhoid was negative. Notwithstanding these facts, this physician declared it to be a case of typhoid fever. Another physician was called in and the case was diagnosed as syphilis. She was pregnant four or five months, and it was diagnosed syphilis on account of her husband. When I returned, unctions of mercury had been given and she had had a miscarriage. After studying the case I made a diagnosis of sprue. That is not a condition that we find in the United States. It is a tropical disease. She is today pregnant, and will have a child, and has no syphilis, although the physician had given her husband a certificate that he was free from syphilis prior to the marriage. I never saw the certificate, although I have asked for it many times. This person had forty or fifty actions a day, and the excreta were examined pathologically, and there was no evidence of *uncinariæ*. This is the second case

which I know of personally, in which physicians of the greatest eminence were called in, and made a diagnosis of typhoid. One of these cases was sprue, and I believe the other was also. The second of these patients died. I believe she died of sprue, and sprue can only be cured by lemon and milk, as anything else will kill them. The diagnostic points are the fungiform papillæ standing out on the tongue, the condition of the throat and the diarrhea.

DR. IRION: I agree with Dr. Thornhill that, if we treat all cases and they do not respond at the end of eight or ten days to the quinin treatment, it is a case of typhoid. I always begin my treatment with a purgative, and pretty strong doses of quinin. Of course, there was a malarial condition which the quinin got rid of. I believe his view of the treatment is the proper one and the correct theory upon which to treat the disease. It seems to me the most important item of diet is buttermilk. I can remember many cases, some of them where the whole family went through the disease. I relied entirely upon buttermilk. I gave them that from the beginning. Of course there was no butter in the milk. I saw after that myself. After a few days a perfect tolerance of the stomach was produced. I believe that if we used buttermilk that about ninety-five per cent. would get well. I use very little medicine. I also use the warm bath. I find this superior to the cold bath. I am thoroughly convinced that with that line of treatment most cases would get well.

DR. E. O. TRAHAN: Agreeing with what Dr. King has said, I believe that prophylaxis is the most important part of the treatment. There is danger on the part of the patient, and others, on account of the urine. It has been demonstrated that during quite a long period after typhoid the urine contains bacilli. I had a case of a young man who was convalescent and doing well, but he had a recurrence of fever. I had his blood examined for malaria, and no plasmodia were found. I had his urine examined and bacilli were found. Now he was certainly a source of danger to others, as he was not at all careful as to where he passed his urine.

DR. J. J. ARCHINARD: It seems to be that this discussion is becoming promiscuous. Some are talking about treatment. Some are talking about making soups, and it seems to me that we ought to have some order and follow it.

Orleans Parish Medical Society Proceedings.

President, DR. C. JEFF. MILLER.

Secretary, DR. AMEDEE GRANGER

141 Elk Place, New Orleans.

In Charge of the Publication Committee, DR. AMEDEE GRANGER, Chairman,
DRS. GEO. S. BEL and E. H. WALET.

MEETING OF JUNE 23, 1906.

DR. S. P. DELAUP read a paper entitled

The Surgical Treatment of Prostatic Hypertrophy.

The important question of the hour in genito-urinary surgery is the treatment of prostatic enlargement. And this is my excuse for bringing the subject before you today for consideration and discussion. That the subject deserves attention and discussion is strikingly shown by the reports of many surgeons in the medical journals of the last few years. It was but a few years ago that the catheter was regarded as the main reliance of the surgeon for the relief of the discomforts and dangers of prostatic obstruction. And if we are to believe the reports of those working in this branch of surgery, it is now thrown aside for more radical procedures.

To the physician who wishes to decide upon the best method of treatment of prostatic hypertrophy, the vast and still growing amount of literature on the subject is more than confusing. He finds the leading authorities at variance on all questions save two, viz.: that the bladder cannot be handled with impunity, and that all methods of relief are accompanied with some danger. On the one hand should he favor the views of English surgeons he will select the suprapubic operation, which is the favorite and almost the exclusively practiced method in England; on the other, the French authorities will tell him to choose between perineal prostatectomy or the Bottini method. If he desires to be patriotic and to follow American up-to-date methods, he will have to decide

from widely divergent views, for all methods are practiced and find leading surgeons advocating them.

The galvano-cautery, the suprapubic and perineal operations are most generally recommended with the latter operation in the ascendancy.

However conflicting may be the opinions of surgeons as to the operative method of their choice, they all agree that the operative treatment of prostatic hypertrophy has been brought to a sufficient degree of perfection to make it evident that the patient should be given the benefit of an early operation, and should not be submitted to the danger of catheterism as he has been in the past, until it is nearly hopeless to interfere surgically.

But what has caused the progressive surgeons to adopt and advocate such radical procedures? may be asked. The answer is readily found in the great improvement in operative technic and in anesthetics, especially the recent introduction of spinal cocainization, and also to the greater experience and therefore increasing confidence of surgeons.

INDICATIONS FOR OPERATION.

In this paper I shall not enter into a consideration of the etiology, symptomatology and pathology of prostatic hypertrophy, but shall limit my remarks to a review of the operative treatments that have been found to be the best. I shall therefore begin by a consideration of the indications calling for surgical relief, later to describe what is the best means of affording this relief to the patient, and finally close by a general summary.

After fifty years of age, one man in every nine is the subject of prostatic hypertrophy. About twenty per cent. of these show symptoms more or less marked. Every case of prostatic enlargement must be treated on its own merits. Some merely require daily catheterization with local and constitutional treatment, others need some one of the so-called palliative operations, while a large number can only be cured by a radical operation. It has long been recognized that the degree of obstruction bears no necessary relation to the size of the prostatic enlargement. Shall not the use of the catheter first be tried? Pilcher answers this question as follows: Certainly as a temporary resort, but, in the light of

present experience, always rather under protest than as a measure possessing the full recommendation of the surgeon. Doubtless, in many cases, operation on the first appearance of serious obstructive symptoms will be impracticable, either through the disinclination of the patient to submit to such an operation as prostatectomy, or his inability to give up from his occupation the time required for its performance and recovery thereupon, provided the use of the catheter is found to be unattended with any special trouble or discomfort; nevertheless, it is impossible to emphasize too much the great difference in the risks, both as regards danger to life and probable perfection of cure, of operations done early before the inevitable bladder, urethral and kidney infections have developed, the sure ultimate consequences of the use of the catheter, and of those which have to be done as a last resort in the presence of some or all of these conditions.

The particular indication for prostatectomy today, therefore, is a degree of urinary obstruction that interferes materially with comfort or entails notable disability, which examination demonstrates with reasonable certainty to be due to enlargement of the prostate or to fibrotic changes in its texture. Great age and advanced kidney lesions are the most frequent conditions that may contraindicate any serious operative procedure, requiring the surgeon to be content with the continued use of the catheter if practicable, or, if not, with a rapidly executed suprapubic section for drainage, under cocain.

When should operative interference be advised? This is the vital question in hypertrophy of the prostate, and it should be settled as decidedly as the similar question has been in appendicitis.

The old practice of putting the catheter into the hands of the patient and teaching him its use should be condemned, for the danger to the patient commences as soon as it is necessary to resort to the daily use of the catheter. A Bottini operation, or a prostatectomy performed as soon as the symptoms of obstruction begin to appear, offers the patient a better chance for health, comfort and prolongation of life than the unfortunate patient who leads a catheter life. It is well known that patients who have to depend on constant catheterism sooner or later develop complications from the use of this instrument which dooms them to a life of suffering

and misery. Experience proves that these patients eventually succumb to one or the other sequelæ attendant on this method of treatment. As soon as the symptoms of obstruction make themselves manifest, the time has arrived either for a palliative or for a radical operation, which can be undertaken with the least danger and with assured beneficial results (Horwitz). Failure of palliative treatment is then the condition calling for operation. But to be a little more explicit and less radical, I shall quote Alexander's summary of the conditions that demand operative treatment for prostatic hypertrophy:

1. When there is complete, or almost complete, retention of urine, due to prostatic outgrowths about the internal urethral orifice or projecting into the prostatic urethra, making the patient entirely dependent at all times upon the use of his catheter. The consequences cannot be doubtful in such cases, and operation affords the only means of averting fatal disaster.

2. When there is marked and continuous vesical irritability, due to intravesical outgrowths, which cannot be allayed by the most careful catheterism and washing of the bladder. These patients usually suffer from frequent attacks of hematuria, and cystitis, when it develops, is usually severe.

3. When, in spite of careful catheterism, the amount of residual urine is steadily and surely increasing, showing a gradual failure of expulsive force in the bladder.

4. When catheterism is becoming more and more difficult, in spite of every precaution, and when it is frequently followed by hemorrhages.

5. When catheterism, in spite of every precaution, is frequently followed by attacks of cystitis.

6. In cases of long-continued vesical inflammation which do not yield to treatment.

7. In cases in which the patients cannot, or will not, use a catheter, and take the necessary aseptic precaution to make its use of value.

In a word, as the average patient will usually not acquiesce to an operation unless his symptoms force him to it, the physician must then employ catheterism, with all that the term implies, in the treatment of prostatic enlargement, and when that fails, and the

integrity of the bladder and kidneys is threatened, he should resort to operative treatment before these organs have become hopelessly damaged.

MODES OF OPERATION.

The best method of treating prostatic hypertrophy is still unsettled and is the subject of controversy. The method adopted will depend on taking into consideration the age and condition of the patient, the character of the growth and the degree of urinary obstruction. The various modes of operative treatment applicable to prostatic hypertrophy may be classified as follows:

1. The establishment of a permanent artificial exit for the urine—a ventral or perineal vesical fistula. The palliative operations.

2. A reduction in the size of the prostate by a so-called sexual operation, such as castration, resection of the vas deferens. The indirect operations.

3. The relief of prostatic obstruction by operation upon the gland itself. The radical operations.

The palliative operations are aspiration and cystotomy. Rectal and perineal aspirations are here mentioned but to deprecate them. Suprapubic aspiration may be resorted to in cases of acute retention. The suprapubic fistula has been often made in the past half century, usually by puncture with a trocar, sometimes by cystotomy, a tube being more or less constantly worn subsequently. A perineal fistula kept open by a soft catheter, passing through the incision and the prostatic urethra, has also been found useful (Morrow).

Cystotomy is usually performed with the intention of establishing permanent drainage, often for the cure of chronic cystitis. It may relieve pain and spasm, but rarely cures cystitis. As a palliative measure it had its days of usefulness before the introduction and perfection of the radical procedures.

In extreme cases great relief at far less risk is afforded by drainage of the bladder through a suprapubic or perineal opening, which can be maintained as a permanent fistula if desired. The ventral opening is preferred as a permanent exit, because more easily endured and managed by the patient. Palliative operations are,

in reality, but temporary expedients, and always unsatisfactory, and should seldom be resorted to.

Indirect Operations. The main indirect operations have been castration, advocated by White; ligation of the vasa deferentia, Mears; vasectomy, Harrison; ligation of the internal iliac artery, Bier.

The object of all indirect operations is not to remove the urethral obstacle, but to cause atrophy of the prostate. However, pathologists have failed to find atrophy in prostates after castration, and explain the beneficial effect of castration by relieving the congestion of the gland. These indirect operations have now been abandoned, even by the surgeons who have devised them.

In a considerable number of prostatics the palliative measures already enumerated fail to avert constant suffering and a fatal result. The cases were formerly regarded as beyond surgical aid; aside from the relief obtained by suprapubic puncture, they were abandoned as hopeless.

Radical Operations. The three radical operative measures recognized today in the treatment of prostatic enlargement are: Galvano-caustic prostatotomy (Bottini operation), and perineal and suprapubic prostatectomy. There can be no question but that each of these three operations has its decided merits, and will hold its own distinct place in the surgery of the prostate. One method should not be employed to the absolute exclusion of the two others, so it should be the aim of every surgeon to practice each of these methods (Willy Meyer.)

Bottini's operation, being a purely intravesical intervention in which the gland causing the obstruction is not removed, but merely furrowed, has, of necessity, a larger percentage of failures, while the death rate is slightly lower than that of the operations with the knife. From a study of the statistics, it will be seen that it is a justified surgical procedure of great value, and that it is indicated in a large number of cases. In the series of prostatic cases collected by Watson he found that the obstruction at the vesical outlet was due, in nearly ninety per cent., to a median lobe enlargement, which condition is amenable to relief by the Bottini operation, especially if the operation is performed as soon as the symptoms make their appearance. As Willy Meyer says, if each

case is properly examined so that the surgeon has a clear idea of the configuration of the enlarged gland, the condition of the urethra, the bladder and kidneys, the operation is by no means either a blind one, or one performed in the dark. That the operation requires special skill and knowledge there is no question, and that if it is properly performed in suitable cases the mortality is small and the results gratifying.

Chetwood's operation is a modification of Bottini's. A perineal urethrotomy is performed, and through it the bladder is explored and the obstructing lobes cauterized to precisely the proper extent to lower the urethral orifice. The object of this operation is not to remove the whole prostate, but simply to lower the level of the prostatic orifice. It is the median lobe that is assailed. Keyes says that, as compared with Bottini's operation, Chetwood's modification has the advantage of being accurate and certain in its action of permitting prostatectomy if the obstruction is not removed by the burning, and of providing adequate drainage. It possesses all the advantages of Bottini's operation, and has the sole disadvantage of requiring perineal section.

The chief difficulty in perineal prostatectomy is in reaching the prostate. Some operators like Alexander advise a suprapubic cystotomy for the purpose of search and introduction of two fingers to press the prostate out at the perineal opening; others do away with the suprapubic opening and perform the enucleation aided by mechanical means, either a metal tractor (Albarran, Lydston, Young), or an inflatable rubber bulb (Syms). These are inserted into the bladder through the perineal wound. This elimination of the suprapubic wound spares the patient a good deal of post-operative inconvenience, and only sacrifices the suprapubic search which may be replaced by a digital examination through the perineal wound, or by a previous cystoscopy.

By the recent adoption of modifications by which the gland is rendered more accessible, and placed under better control in performing the perineal operations alone, the combined suprapubic and perineal method has lost its chief advantages. We may, for practical purposes, eliminate the combined operation, and are left with the three standard operations to choose from, viz., the galvano-cautery prostatotomy (Bottini), the suprapubic prostatectomy and the perineal prostatectomy.

CHOICE OF OPERATION.

It is of interest to note, says Pilcher, in surveying the literature of the subject, that among the many different methods of attacking the prostate that have been proposed by different surgeons, practically equally good results are reported to have been secured by the most diverse methods by men who had become specially skilled in their application.

The object of every operation should be the removal of the prostatic obstacle, therefore, the ideal operation is the one which accomplishes this with the least traumatism and danger.

The primary indication for prostatic dysuria is the re-establishment of the ability of the individual to readily, fully, and painlessly evacuate his bladder. The accumulated experience of the past ten years is that in more than sixty per cent. of the cases that have been subjected to total prostatectomy, the ability to empty the bladder spontaneously has been restored, and has been maintained permanently, so that the use of a catheter has been no longer necessary; there was but little, if any, residual urine, and the quality of the urine has become fairly normal. In a very large proportion of the remaining cases a marked improvement to the obstructive symptoms has resulted; the amount of residual urine has decreased, the intensity of the cystitis has diminished, and the frequency of catheterism has been lessened, and the facility of passing the instrument has been increased (Pilcher).

The question of mortality naturally takes precedence in the consideration of any operative proposition. There must, of necessity, be some mortality in any and every kind of surgical intervention in prostatic patients. Sepsis, renal insufficiency and the multiple degenerations incident to old age, are complications in varying degrees of combination that have to be reckoned with in many instances, and which must determine inevitably a fatal result in a certain proportion of cases.

The following recent statistics are of interest, and may be taken as about the mortality to expect:

Bottini operation—Horwitz, 95 cases, 3 deaths; Freudenberg, 25, 0; Young, 41, 3; Bangs, 34, 3. Total, 195 cases, 9 deaths, mortality, $4\frac{1}{2}$ per cent.

Perineal operations.—Goodfellow, 78 cases, 2 deaths; Watson, 14, 2; Murphy, 51, 1; Syms, 33, 2; Young, 75, 4; Horwitz, 38, 6; Albarran, 59, 2; Proust, 30, 0; Pauchet, 20, 1; Rofin, 20, 1. Total, 418 cases, 21 deaths; mortality 5 per cent.

Suprapubic operations.—Freyer, 107 cases, 10 deaths; Maynihan, 12, 1; Mayo Robson, 12, 0; Horwitz, 11, 2; Barling, 10, 3. Total, 152 cases, 16 deaths; mortality, 11 per cent.

At present it would seem that a surgeon must expect a death rate after perineal prostatectomy or the Bottini operation of from 5 to 10 per cent., and after suprapubic prostatectomy of at least 10 per cent.

According to Goodfellow the perineal method is preferable for the following reasons:

1. It provides direct access to the diseased parts for exploration and operation.
2. It affords more room for manipulation.
3. It is the best route for drainage.

Goodfellow maintains that suprapubic prostatectomy entails an unnecessary danger to the patient, and Freyer's statistics bear him out in this fact. Convalescence is tedious and protracted, infection of the prevesical space is of frequent occurrence, the uphill drainage of the bladder cannot be compared with the perineal drainage in the line of gravitation, and prostatectomy performed through the upper route necessitates a double wounding of the bladder; that is to say, through its upper wall and through its lower or posterior wall. While perineal prostatectomy does not involve the bladder at all, the bladder is uninjured, the drainage of the bladder and the drainage of the prostatic sheath are separate and distinct, convalescence is short and safe, the patients may be up on their feet at periods varying from one to five days after the operation.

Lydston prefers to begin by the perineal route and to add the suprapubic incision when necessary. Perineal incision, he asserts, not only does not complicate the operation, but facilitates drainage, which can be performed by the through and through method. The same author also believes that a prolonged cystoscopic exploration in the majority of cases is not only useless, but dangerous, especially if anesthesia is employed.

Whenever the patient's condition, irrespective of age, seems to

warrant it, prostatectomy should be done, since the total removal of the mechanical obstruction naturally represents the most surgical procedure.

While it is true that either method, perineal or suprapubic, can be successfully employed to the exclusion of the other in removing the hypertrophied prostate gland, it certainly means facilitating our work and is in the interest of the patient if we use both procedures, observing in each instance the one that seems best suited to the particular case.

The selection of the route, on strict indication, is not an easy matter at present. Further reports by surgeons practicing both procedures are needed to decide the question. Both methods are excellent and useful ones. The choice up to the present time is largely a matter of individual inclination (Willy Meyer).

The comparatively frequent appearance of carcinoma of the prostate may prove to become an important factor in deciding in favor of complete removal of the gland.

Advantages of the Bottini operation are low mortality, slight pulmonary complications and shock, absence of general anesthesia, low mortality from uremia, short confinement, and no wound to heal. The perineal route has low mortality, complete results, and open to visual dissection. The suprapubic route has less danger of injury to the rectum and membranous urethra, room for removing larger masses and a shorter time required, combined operation gives greater control of gland and better drainage, but a mortality too high to consider it.

Disadvantages of the Bottini are inefficient drainage of the bladder and liability of retention; secondary hemorrhage, epididymitis, orchitis, repetition of operation may be necessary, small percentage of cures, inability to see the steps of the operation. The disadvantages of the perineal operations are a greater danger from pulmonary complications and liability to injury of the rectum and membranous urethra, with recto-urethral fistula; or incontinence of urine. The suprapubic route has liability to shock and pulmonary complication, and a high mortality. Combined operations show high mortality, pulmonary complications, shock and unnecessary opening (Watson).

From what has been said of the various operations, we may conclude that

1. Castration and the allied operations, while they commonly reduce the congestion of the prostate, affords no permanent relief.
2. Bottini's operation often gives excellent and apparently permanent results. Chetwood's modification may be employed when drainage is necessary.
3. Prostatectomy, in spite of its relatively high mortality, remains the ideal method for radical cure.

OPERATIVE TECHNIC OF THE PERINEAL, SUPRAPUBIC AND BOTTINI OPERATIONS.

In the present article I have selected from certain of the published descriptions, especially from Watson's excellent monograph, only what is needed to make clear some of the more important steps of the operations.

The patient should be prepared for operation by a preliminary urinary antisepsis, by means of both internal medication and vesical irrigations. Rest in bed for a few days is usually advisable, but in elderly patients should be employed with great circumspection, as they become debilitated very rapidly under the confinement. The kidneys should be flushed by a liberal amount of spring water.

The essentials for the successful performance of the perineal operations are:

1. The free exposure of the gland.
2. Making the gland accessible, and maintaining it in a fixed position while removing it.
3. Avoiding injury to the rectum and urinary sphincters.
4. Avoiding unnecessary injury to the urethra and ejaculatory ducts.

Before making the incision a grooved staff is introduced in the urethra and should not be made to project in the perineum, but should be raised so as to bring the membranous urethra as close as possible to the pubic arch and increase the distance between the urethra and the rectum (Proust). The transverse curved (Celsus) incision extending from one ischial tuberosity to the other in front of the anterior margin of the anus, and subsequently slightly modified into the inverted V, and still further into the inverted Y incision, is employed to expose the prostate gland. The rectum is then freed from the posterior urethra and prostate by

transverse division of the tendinous centre of the perineum, and blunt or finger-tip dissection between prostate and rectum until the outer covering of the former is fully exposed over its forward and posterior surfaces. The urethra is opened at the junction of the membranous and prostatic portions, the staff withdrawn and a tractor passed through the perineal wound and prostatic urethra into the bladder. In case no tractor is at hand, the finger is introduced through the urethral opening and the enucleation done with it. The gland is brought out of the perineal wound by the tractor and an incision of the sheath is made over the lateral masses parallel to the urethra to preserve it and the ejaculatory ducts. Enucleation of the hypertrophied masses is effected with a blunt dissector or the finger. The enucleation being always carried on inside the outer capsule or sheath. When the lobe on one side has been separated in this way, it is seized with forceps and drawn out. For the suprapubic operation, the bladder is opened by the usual cystotomy incision. The best means for rendering the gland accessible is by lifting it upward with the fingers in the rectum and by pressure upon the perineal surface with the thumb at the same time.

Freyer uses the sharpened finger nail to score through the mucous membrane over the most prominent part, and having reached the true capsule, the enucleating finger dissects the gland away from its capsule. Hemorrhage is controlled by hot irrigating solutions. The cavity formed by the removal of the prostate is obliterated by gauze pack, and a drainage tube inserted through the suprapubic opening. Frequent and sometimes continuous irrigation of the bladder is practiced for a few days.

In doing the Bottini operation the bladder should not be empty, as it is then much more exposed to the chance of being injured by the incision. Immediately before operation wash out the bladder with a boric acid solution, leaving in the organ about four ounces. Introduce the incisor, tightly closed, slowly into the urethra, and carry it carefully over the obstruction into the bladder; turn the beak downward and hook it snugly against the prostate by making traction on the handle; introduce the finger of the left hand into the rectum and verify the correctness of the position of the instrument and keep it there during the operation; cause water to flow through the instrument for a moment, then close the electric cir-

cuit (45 amperes), and after a few seconds slowly extrude the blade (1 to $1\frac{1}{2}$ inches, or $2\frac{1}{2}$ to $3\frac{1}{2}$ centimeters) by turning the handle of the instrument; slowly return the blade to its place and open the electric circuit. The bladder is again irrigated, and if necessary a catheter à demeure is left for a few days, and the patient given water freely, and submitted to general and local bladder medication.

Horwitz has tabulated reports on 886 Bottini operations from 48 operators, of these 84 per cent. were improved or cured, 10 per cent. were unimproved, the mortality being 6 per cent.

The after treatment consists in the following essential points:

1. To keep the kidneys very active by means of water by mouth (from two to four quarts a day), and, if necessary, by rectal injections or subcutaneous infusion of normal salt solution.

2. To get the patient up as soon as possible (propped up the second day, out of bed the fourth day, and walking as soon as possible).

3. Early removal of the gauze and tube drains. The former had best be removed on the second day and the tubes on the fourth day.

4. Avoidance of instrumentation.

The complications attending the operation as a rule are not serious. The following complications occurred in connection with the Bottini operation in a series of fifty-nine of his cases reported by Willy Meyer. Perineal abscess followed the operation in four cases; in two it was due to injury of the membranous urethra, in one case recto-urethral fistula, in six cases epididymitis, in two cases orchitis. Altogether thirteen, or 22 per cent. of the whole number in which there were serious or annoying complications associated with the performance of the operation.

In 13 per cent. of the Bottini cases the operation had to be repeated. Incontinence of urine resulted in 2.6 per cent. of the cases. The operation failed in 11.6 per cent. of the cases. Of the sixty-nine fatal cases of the Bottini operation, eight were due to perforation of the bladder by the incising blade.

In the perineal operations, twice the peritoneum was opened; one patient died, one recovered, urethrorectal fistula occurred in 2.7 per cent. as a result of operation. Incontinence of urine occurred in 7.4 per cent. of the operations.

In the suprapubic operations, suprapubic fistula occurred in 1 per cent. of the cases; infiltration of urine in the prevesical space in 1.6 per cent; peritonitis in one case; rectum was injured in one case; failure of the operation in 6.7 per cent. (Watson).

Complications modifying the perfection of the result are: Impotence, urinary incontinence, epididymitis and orchitis, fistulæ, stricture of the urethra. These are infirmities which are of little magnitude by the side of the serious malady for which it has been substituted.

In the case of young prostatics still possessing fair sexual vigor, it is evident that the surgeon, keeping in view always the prime indication for a full and absolute removal of obstruction, so as to insure a permanent ability to spontaneously empty the bladder, should adopt an operative technic that will avoid, as far as possible, injury to the ejaculatory ducts.

Urinary incontinence, epididymitis and orchitis occasionally develop in cases of prostatectomies. Fistulæ, suprapubic, perineal and recto-urethral are also among the occasional sequelæ of operation for the removal of the prostate. Urethral stricture does not seem to have followed to any serious degree the extensive lacerations and removals of the prostatic urethra which have marked many of the operations upon the prostate. It has been frequently the case that the entire prostatic urethra has been taken away with no subsequent disturbance of the urinary functions. Sepsis has played the most important part in the fatalities associated with the performance of the Bottini operation, the least in connection with that of the radical perineal and suprapubic operations. Post-operative pulmonary complications and shock have been minimal dangers connected with the Bottini and maximal in the other two.

The most important advance made with respect to the perineal and suprapubic operations has been in the recognition of the fact that the more radical procedure of total removal was not more dangerous *per se* than the partial removal of the obstructing portions, and in the substitution of the more radical measures.

The results with respect to cure are far better with perineal and suprapubic operations than in the Bottini.

The usual causes of death in prostatectomy are shock, hemorrhage, sepsis, suffocation, heart failure.

As to the technic I employ in prostatectomy, I would say in perineal enucleation it is the same as that practiced by Young, of Baltimore.

With reference to anesthesia it is needless to say that I have used spinal cocainization exclusively. I firmly believe that, through the use of spinal analgesia the radical removal of the prostate through the perineum has been made a very much safer procedure than it was when ether and chloroform were necessary, and that the Bottini method has thereby been robbed of the strongest argument in its favor.

My personal experience with perineal prostatectomy is limited to seven cases; one of which died of uremia two weeks after operation, another died of pneumonia sixteen days after operation, the other four cases have done remarkably well and at the time of their discharge were able to void urine naturally. In neither of the two fatal cases can the result be properly attributed to the operation; in both the patients were in desperate and hopeless condition when first seen by me.

As to the Bottini operation I have employed it in two cases with marked beneficial results. I have also assisted my friend, Dr. Chassaignac, in over twenty-five Bottini operations. Dr. Chassaignac has recently informed me that of that number only one died, the others, with few exceptions, have been much benefited, and some even cured.

CONCLUSION.

1. A routine method is not applicable to the treatment of prostatic hypertrophy; every case is a law unto itself, and the treatment will depend on the various conditions presented in each individual case.

2. The prostatic suffering from persistent severe cystitis, or difficulty or pain in catheterism, should early receive operative relief; delay is destructive to his urinary apparatus, and hence to his chance for life and comfort.

3. The dangers attendant on the daily catheterism are greater than those of a radical operation performed at the onset of the symptoms caused by the obstruction, and the earlier the operation the fewer will be the complications encountered.

4. The choice of operation must be determined partly by the patient's vigor and partly by the condition of the bladder and kidneys. In those cases too weak to withstand an operation, suprapubic drainage is advised, and if improvement follows this procedure, then a radical operation is indicated.

5. The proper time to perform a radical operation is reached as soon as it becomes necessary for a patient to resort to daily catheterism.

6. A perineal prostatectomy is best suited for those cases where the enlargement of the lateral lobes has a tendency to progress toward the rectum, to obstruct the urethra; or to project backward into the bladder. This method is applicable in fully 90 per cent. of all cases, and is the surest, the safest and probably the quickest method of curing the patient. In early operations the results are most satisfactory, recovery rapid, the mortality varying between 5 and 7 per cent.

7. Suprapubic prostatectomy combined with perineal drainage is wisest where there is an enormous intravesical hypertrophy of the lobes, especially if the condition is associated with tumor formation projecting well back into the bladder.

8. A prostatectomy is usually attended with more risk than the Bottini operation, and the convalescence is more prolonged. Therefore, in suitable cases where the general health and kidneys counterindicate more radical measures, and also in those cases where prostatectomy is refused, the Bottini operation is especially indicated.

DISCUSSION.

DR. KEITZ: What were the most frequent causes of death? In what percentage of the cases was death due to the operation itself?

DR. CHASSAIGNAC wished to place one restriction upon the definite and specific law laid down by the essayist that cases with chronic hypertrophied prostates should be operated on as soon as the daily use of the catheter becomes necessary. Retention is sometimes only temporary, the result of some intercurrent cause, and may persist for a few days or weeks, requiring daily catheterization, even sometimes the use of the retention catheter. He be-

lieved that this daily catheterization, under strict aseptic conditions, should be continued for a few weeks, because we know that in some of these cases the bladder regains its normal tone and the patients make complete recoveries. He related a case in which he had followed this procedure three times within a period of ten years and it was only a few weeks ago that a successful prostatomy had to be done on the patient, whereas, otherwise it would have been done ten years before.

DR. DELAUP, in closing: I meant the surgical treatment of the chronic, daily users of the catheter, and not the acute or sub-acute cases. The operations *per se* have practically no mortality. The latter is most commonly due to the poor health and damaged kidneys, which are frequent complications of chronic prostatic hypertrophy. Suprapubic prostatectomy has some mortality which is usually due to concealed hemorrhage. On account of the poor health and bad kidneys of these patients, they should be allowed to get up as soon as possible, in order to avoid pneumonia, sepsis and other post-operative complications, frequently seen in old and debilitated patients.

DR. FENNER read a paper entitled *A Case of Osteo-Genesis Imperfecta*.

(Paper not furnished Publication Committee.)

DISCUSSION.

DR. TRAHAN asked Dr. Fenner how he would differentiate between osteo-genesis imperfecta and rickets?

DR. KEITZ: If in the case reported by the doctor the bones were so brittle, would that not mean that the inorganic constituents were in excess, and if that were the case should dentition not have been early, instead of retarded? Was there any history of syphilis or struma in the cases reported by the doctor?

DR. DABNEY has, in his practice, a family composed of mother, two daughters and a son, all well-formed, well-nourished, beautiful examples of physical development, and in whom there exists a remarkable fragility of the bones. The boy suffered as many as five different fractures. The mother and both girls each suffered

about three fractures. One of the girls struck her arm against a chair while dancing and fractured that extremity. There were no stygmata.

DR. PERRILLIAT asked Dr. Dabney whether he had noticed any delayed or non-union in the cases of frequent fractures which he had just reported?

DR. DABNEY: None whatever. Convalescence and healing were normal.

DR. FENNER, in closing: Rickets is characterized by softness and bending of the bone, not by fracture. There is an enlargement of the epiphyses and under the microscope we find the bone layer under the periosteum enlarged and spongy. Its pathology is very different from that of the disease under discussion. Evidences of rickets are principally found at the osteo-chondral junctions. In answer to Dr. Keitz, in the condition called idiopathic fragile bones, there is apparently normal development, up to the time of bone formation, and fractures occur upon the slightest provocation. He did not mean that all such cases were cases of osteogenesis imperfecta, but certainly those cases that occurred in very early life, possibly even during fetal life, were examples of that disease.

In his own case the family history was negative and he was certain that neither syphilis nor struma had been mentioned as probable causes in any of the cases collected by Nathan. Syphilis is known to be the underlying cause of nearly all anomalies seen in early fetal life, and it was possible that it might be at the bottom of these cases of bone anomalies.

N. O. Medical and Surgical Journal

Editorial Department.

CHAS. CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

Health Conditions.

The public health in New Orleans and in Louisiana is in a very satisfactory condition. There is no disease which is specially prevalent, and the mortality rate is low. It is now too late for any recrudescence of yellow fever, as sufficient warm weather has occurred to have roused any hibernating infected mosquitoes that could exist, or hatched any poisoned eggs that might have been deposited in some forgotten place, long enough ago to have given rise to several third degree generations of *stegomyia* if there had been any left to breed. Provided our health officials guard well the gates and the medical profession continue as watchful as they seem to have been, we are absolutely safe for this season.

There have been false alarms. Several cases have been reported at different times as suspicious, but each time a careful investigation by a commission of careful, competent and honest men has shown that the fear was unfounded. Nevertheless, the profession has encouraged the sending in of these reports, as it is far better, needless to say, that a hundred such be made rather than a single genuine case escape detection and attention. The mere fact that these cases were promptly reported to the Board of Health, sometimes with very little reason, shows that the physicians are on the alert and are living up to their conviction that telling the truth is not solely the only honest course, but the only wise one.

Continue, brethren. Do not hesitate for fear that you may cause alarm or unfavorable comment. Conditions have changed. People do not mind these things as they did, either here or in adjoining communities. Be prompt when you have the least ground for suspicion, but be sure at the same time to keep an accurate

chart and careful clinical record of the case so that when reports are sent to the Health Boards of other States they can be complete as well as intelligent, and bear on their face the evidence that we are telling the truth and the whole truth.

Pure Food Bill.

Considerable gratification is at present indulged in by the medical profession at the passage of the Pure Food Bill by the last National Congress. It is only right that we should congratulate ourselves on this result, as a consistent effort has been made by the medical press and the American Medical Association towards this end. It is a matter of comment also that the Congress should have been intelligent enough to grasp the purpose of such an act and sufficiently so to have made it a law.

The medical profession, however, are only indirectly interested in the bill, while the public is the immediate beneficiary. Now that it has become a law it remains to be seen how far it will reach in its actual execution. Since the days of the Revolution Yankee craft has been synonymous with adulteration, and, while the United States is not alone in the manufacture of nostrums, it has far surpassed all other nations in this particular. There is no doubt that there has been a public demand for such, and the extent of the abuse of themselves in this regard has been evident to the laity only in the past few years since an active crusade has been undertaken against the household remedies. The majority of nostrums have their chief offense in the pretension of curing almost all diseases, some of which have baffled the earnest efforts of the medical profession even after the most intelligent and scientific study. The new law will affect these only so far as their composition and labeling is concerned, as it will require honest ingredients and a proper branding of the product. The host of remedies, however, which contain as active ingredients commonly recognized poisons and alcohol will be compelled in the future to carry the percentage of these ingredients plainly marked on the face of the bottle which is sold to the consumer.

Considerable agitation arose among the wholesale manufacturers of drugs during the progress of this bill through Congress, but we

fail to see where such manufacturers could be injured by the Act. As a matter of fact, honest manufacturers are really to be benefited, as it places in their hands the opportunity of supplying United States Pharmacopeia and National Formulary combinations for the use of the profession. True, the bill aims at reducing the specific prescription departments, and the abolishment of these can only help both the manufacturer and the physician, as well.

The whole movement points to the desire for a higher education of the public to the point that they may protect themselves against the humbuggery which has so long prevailed. More than this, it will stimulate the physician to write his own prescriptions and to get away from depending so much upon the combinations of manufacturers claimed to be specific for particular diseases. A few years ago the medical schools were deficient in their instruction on materia medica and pharmacology, but this is being corrected more and more every day.

The administration of the Pure Food Bill is to be placed in the hands of the Secretary of the Treasury, the Secretary of Agriculture and the Secretary of Commerce and Labor, and this looks to be a formidable enough committee for execution of the provisions of the bill under exact rules. The recent Chicago slaughterhouse scandal, the continual discussion of poisoning from canned foods, all show the necessity for a certain supervision over those foods which go into the household unprotected.

It might be said that the law could have been made more comprehensive, but it will be easy to get the support of the public itself as time goes by in demanding a further expansion of the law if it proves beneficent. Some States, particularly Ohio and Pennsylvania, have for a number of years actively administered similar food laws, and it is only a question of time when other States will follow this example.*

The medical profession is frequently subjected to newspaper criticism because of their anomalous pretension to advanced education in these matters when some of the rank and file themselves depend upon quasi-nostrums in their practice. We realize this condition and it is for the betterment of the profession that the vast majority who represent the more enlightened class have so long been fighting for legislation.

*Louisiana is now in line, the legislature having finally passed a pure food bill at the session just adjourned.

The Report of the City Board of Health of New Orleans.

The City Board of Health, soon to be retired, has presented its biennial report to the officials to which it is beholden. Taken altogether, it is most creditable; it shows the detail which is necessary for the successful operation of such a sanitary body and particular notice should be taken of the thoroughness which has marked the inspection of meat and the attention to the New Orleans milk supply.

This Board of Health, which retires in September, notwithstanding the public condemnation last year and the outcry against them as the natural scapegoat, must go down into history as responsible for the anti-mosquito crusade and the results which have followed this. The Chairman of this, the first Board of Health of the City of New Orleans, has performed a large amount of educational labor, not only in the city of New Orleans, but throughout the State, and, at his initiative, taken some three years ago, the city of New Orleans finally adopted the ordinance at present in force compelling the screening of cisterns. Small reference to this occurs in the report of the Board of Health, but the ordinance itself is quoted in full.

The report gives a large number of tables showing comparative death rates for the city during the past sixty years which are interesting, and particularly as indicating the gradual improvement in the health condition of the city.

Considerable other material is touched upon in this report, which is all in all most creditable to the retiring Board of Health, its Chairman and its Secretary.

Bug Under the Chip.

Impressed by the usual attitude of the majority of the lay press regarding patent medicines and nostrums, it was a relief and a pleasure to read the subjoined correspondence and editorial, and we feel that we should give all of our readers an opportunity of deriving the same satisfaction from its perusal:

"TOLEDO, OHIO, MAY 22, 1906.

News, Monroe, La.:

"Gentlemen—Should bills introduced by Senator Wingate and Representative Smith become laws they will force us to discontinue advertising in your State. Your prompt attention regarding these bills we believe would be of mutual benefit.

"We would respectfully call attention to contract which we have with you at present. Respectfully,

"CHENEY MEDICINE COMPANY."

"DES MOINES, IOWA, MAY 23, 1906.

"Editor of News, Monroe, La.:

"Dear Sir—We learn that there are two bad bills before your General Assembly, viz.: Senate Bill No. 8 by Mr. Wingate, and a bill in the House of Representatives by Mr. Smith.

"Each of these bills require the full formula on every bottle of patent medicine. If the manufacturers should publish their full formulas any druggist could then make and sell their preparations, not only in Louisiana, but wherever the medicine was known and used.

"You will see at once that the purpose of these bills is to kill the sale of all patent medicine in that State, as manufacturers will not publish their formulas.

"These bills are the rankest class legislation and intended for the sole benefit of the medical profession. We are confident that you will object to their enactment, and if so kindly write the Senator from your parish and ask him to oppose the enactment of Senate Bill No. 8, by Wingate.

"You should also write to your Representative to oppose the patent medicine bill by Mr. Smith. Yours truly,

"CHAMBERLAIN MEDICINE COMPANY.

"By L. CHAMBERLAIN, Secretary."

THE EDITORIAL COMMENT.

"Nay, Pauline, not if *The News* loses every patent medicine advertising contract it now has and never gets another; not even if the loss of the business brings the sheriff and *The News* goes under the hammer.

"Indeed, *The News* thinks these bills are meritorious and in the interest of the public health, and instead of asking our Senator and Representatives to vote against them, will ask them to vote for them. They should also vote for a pure food law.

"*The News* does not think that all patent medicines are impure, bad and injurious, but it is convinced by ample evidence that many

are and the people should know the good from the bad—they should know what they swallow.

“Many fake patent medicine concerns are selling harmful, even poisonous nostrums, without conscience, unmindful and not caring about the fat graveyards they are making so long as the dollars pour into them, and the honest ones should welcome a law that will drive the dishonest ones out of business and safeguard and protect the lives of the people. It is the duty, the sacred duty, of the Legislature to pass such a law. The value of patent medicine formulas cannot be set up against the lives of the people. All of them put together is not worth the life of a single citizen of Louisiana.

“Not on your lives, Messrs. Cheney Medicine Co. and Chamberlain Medicine Co.”

Is it not natural for us to suppose that the position recently taken by our local newspapers and many others throughout the State has been somewhat influenced by lines analogous to those reproduced above? At any rate, one cannot help compare to their disadvantage the result of such stuff upon the editor of the *Monroe News*.

Reporting Cases.

Judging the matter to be of importance when it was announced in the daily papers that a practitioner of a locality within fifty miles from New Orleans had reported the occurrence of a case of yellow fever in his practice a number of days after he was first called to see the patient, and after that patient was actually well, the editors sent the following communication which explains itself and our position very clearly:

JULY 14, 1906.

“*Dr. Sidney Montegut, Laplace, La.:*

“DEAR DOCTOR—THE JOURNAL feels in duty bound to refer to your failure to report in time a case declared by you to have been yellow fever. On the face of what has been published in the public prints we would have to criticise your action, especially as THE JOURNAL has always been very emphatic as regards not only the justice, but the policy of prompt reports. However, our desire is to be perfectly fair and we would be pleased to hear from you should you desire to make a statement, if there are any facts which

have not appeared so far, capable of explaining your course and enabling us to put it in as just and favorable a light as possible. We remain, very truly yours,

(Signed.) "DRS. CHASSAIGNAC AND DYER."

Up to the time of going to press we have received no answer from Dr. Montegut. His silence gives us the right to suppose that he has nothing to say, as our letter could only be construed as being intended to give him the opportunity to get himself right. We regret that the doctor has no defense, and confess that we cannot fathom his object or the mental process which could have led to his action and the apparently clear violation not only of the law, but of the spirit which we believe guides the medical profession of the State.

Abstracts, Extracts and Miscellany.

Department of Internal Medicine.

In Charge of DR. E. M. DUPAQUIER, New Orleans.

CHOREIC AND ATHETOID MOVEMENTS.—Choreic movements, or chorea, are involuntary (often very extensive), muscular contractions, which are not like chronic convulsions, absolutely without coördination, despite their lack of purpose or rule in coördination. They can be differentiated from voluntary movements by their bizarre character and their aimlessness. In pronounced chorea the entire body is thrown into constant motion so that any attempt at purposeful movements is often entirely fruitless. Choreia of the facial muscles is exhibited by grimaces; chorea of the breathing, voice and speech muscles by the choreic articulation, which may render speech quite incomprehensible. Choreic movements are most pronounced in the neurosis chorea. Symptomatically choreic movements occur in the form of hemichorea in some cases of hemiplegia, especially with lesions of the posterior part of the internal capsule, and the optic thalamus (chorea post- or prehemiplegia).

Athetosis may be regarded as a variety of chorea. When the involuntary movements occur slowly and very regularly, the condition is called athetosis. Its significance is not essentially distinct from that of ordinary symptomatic chorea. Posthemiplegic athetosis, involving the muscles of the hand and fingers, is the most frequent form. The muscle unrest observed in Friedreich's or hereditary ataxia is diagnostically an important symptom. French authors speak of it not unfittingly as "instabilité choréiforme." It also belongs to the symptomatic conception of chorea—(*Treatise on Diagnostic Methods of Examination*, by Sahli, of Berne, 1906).

TREATMENT BY X-RAYS.—This comparatively recent method of treatment has received very considerable attention during the past year, and the reports have been almost uniformly favorable. Some observers have reported cures; but the majority have noted improvements, some with return to normal count of white blood cells, some with a reduction merely in the number of cells, but with more or less marked improvement in the general condition.

The question as to the permanency of the results cannot yet be solved, but it must be admitted that the X-rays exercise a powerful influence over the disease as far as the number of white blood cells is concerned. This appears to be a favorable one, for with the reduction in number of cells there is an improvement in the general condition which indicates that the treatment is not merely efficient against the abnormal condition of the blood, but affects the underlying cause. That it does not remove it is, however, shown by the fact that the number of white cells increases again before there is any change in the general condition noticeable to the patient or to the physician. This is well shown by a case of Lommel's. (*Diseases of the Blood*. Pract. Med. Series, 1906.)

Department of Therapeutics and Pharmacology.

In Charge of DR. J. A. STORCK and DR. J. T. HALSEY, New Orleans.

A CASE OF POISONING FROM VERONAL.—Dr. John Germann, in the *Journal of the American Medical Association*, reports a case of poisoning from veronal in which the patient was thought to have taken between 200 to 250 grains in a short time. He remarks:

"If our symptoms could be of an unusual character, I should judge they were the following: 1. Persistence of the coma for a period of 79 hours. 2. The fact that the pulse remained of a good character over such a period of time. 3. The gradual and steady rise of temperature from normal to 108.4 antemortem. 4. The increase of the respirations from 24 to 44. 5. The fact that cyanosis should appear so late in the case. 6. The presence of albuminous urine. 7. The intense cerebral congestion found postmortem, and the very slight edema. 8. The discoloration of the organs (deep congestion), and the altered blood (dark chocolate color). 9. The intense congestion of the stomach, especially of the cardiac end, and the postmortem digestion of the large space of three and one-half inches in diameter.

A NEW SUPPOSITORY.—Edward Baum (*Jour. A. M. A.*, June 30, 1906) advocates the use of a new suppository, suggested by himself. Explanatory cuts accompany the article.

The following are the advantages which he claims for his suppository: 1, the simplicity with which they can be introduced; 2, the length of time in which the medication can be applied; 3, the melting of the suppository at body temperature, thus setting free its medicant which lasts from six to eight hours, constantly medicating the affected parts, besides affording a splendid protection against infection; 4, free bathing at all times; the septal surface is the last to disintegrate, this being provided for by the air spacing between septum and suppository; 5, the suppository can be introduced at any time of day or at bedtime; 6, after surgical operations, this furnishes a splendid dressing; by its constant pressure it prevents oozing and facilitates removal of accumulations in subsequent dressings; 7, it is a valuable protection for mucous membranes from all irritating inhalations of dust, grit, acid fumes, etc.

Formulas.—The three formulas below have been used for their respective conditions, and good results have been noted.

For catarrhal conditions:

R Olei cassiæ	m. v.	3
Olei gaultheriæ aa	m. vii	4
Menthol aa	gr. iv.	2
Thymol	gr. iii	19
Olei eucalypti		

M. Ft. suppositories No. xii. Sig.: Insert one in each nostril at bedtime.

For hay fever:

℞ Ext. suprarenal	
Hydrastini aa	gr. i. 06
Camphoræ monobromatis..	gr. xxiv. .1 5
Menthol cryst	gr. x. 6
Antipyrin	gr. xv. .1
Resorcini	gr. v. 3
Oleo theobromæ q. s.	

M. Ft. suppositories No. xii. Sig.: Insert one in each nostril at any time of day or at bedtime.

For acute coryza:

℞ Olei cassiæ	m. ii. 12
Olei anis	m. iii. 18
Olei thym	m. iv. 24
Olei eucalypti	m. iii. 18
Phenol	
Camphoræ	
Menthol aa	gr. iii. 19
Oleo theobromæ q. s.	

M. Ft. suppositories No. vi. Sig.: One suppository to be inserted in each nostril during the day or at bedtime.

COOLING ACID MIXTURE IN PERICARDITIS.—

℞ Acidi phosphorici diluli.....	m. xl.
Syrupi mori	℥v.
Aquæ q. s. ad.....	℥vi.

M. f. mist. Sig.: A tablespoonful every hour.—BAMBERGER.—

MIXTURE IN CONVALESCENCE FROM ENDOCARDITIS.—

℞ Potassii iodidi.....	:.....ga. xxxii.
Potassii bicarbonatis.....	gr. lxxx.
Spirit. ammon. aromatici.....	℥iv.
Tincturæ cinchonæ comp.....	℥i.
Aquæ ad	℥viii.

M. f. mist. Sig.: A tablespoonful three times a day.—YEO.—

Department of Nervous and Mental Diseases.

In charge of Dr. P. E. Archinard and Dr. Roy M. Van Wart, New Orleans.

ON FIFTY CASES OF INFANTILE PARALYSIS (E. F. Trevelyan, *Brit. Jour. of Children's Diseases*, April, 1906.)—The majority of cases occurred during the second and third years of life, and, curiously, girls preponderated largely over boys. One or both legs were involved in thirty cases, one arm in seventeen, an arm and a leg of the same side in two, and an arm and a leg of opposite sides in one. In six cases of the upper-arm type some of the small muscles of the hand were affected. Recovery might possibly be looked upon as complete in two cases, but in the others it was, as usual, only partial. There was generally a marked contrast between the extent of the early and of the residual paralysis. Separate foci of disease could only explain the paralysis in at least nine cases. Massage, active and passive movements, and, if possible, electrical treatment are of service. Careful attention should be given to the prevention of deformities, especially during the early period of the disease. Orthopedic treatment in its various forms is necessary when deformities develop.—(*Review of Neurology and Psychiatry.*)

WHAT IS HYPNOSIS?—Von Bechteren (*Jour. of Abnormal Psychology*, Vol. I., No. 1) gives a short statement of the current views of hypnotism and of the differences between the school of Charcot and that of Bernheim. According to the former, hypnosis is an artificially produced neurosis akin to hysteria, and has three different stages. According to the latter school these stages are due to the education of the patients of Charcot's clinic. Hypnosis has no relation to hysteria, and is merely sleep induced by suggestion and the different stages depend upon the depth of the sleep and susceptibility to suggestion. The author favors the school of Bernheim, while he denies that all the facts can be explained by suggestion. In one of his patients, where there was no apparent suggestion, percussion of the tibial tendon threw the patient into a deep hypnotic sleep. He therefore considers hypnosis "a special modification of normal sleep, which can be induced by physical as well as by psychical means." There is little difficulty in accepting those

views if one considers individual variations as to the sleep process, and the facts of natural somnambulism.

HEMORRHAGE FROM THE MIDDLE MENINGEAL ARTERY.—J. Hogarth Pringle (*Scottish Med. and Surg. Jour.*, February, 1906) records fifteen cases of head injury followed by hemorrhage from the middle meningeal artery which illustrate well the difficulties in making an accurate diagnosis and carrying out suitable treatment in such cases, owing to the great variations in the symptoms produced by the extravasted blood. Although fifteen cases were associated with fracture of the skull, in two of them the tear of the artery occurred on the opposite side of the skull to the fracture, and were therefore comparable to the cases which have been recorded of tear of the artery without any fracture of the skull at all. Pringle's explanation of the mechanism in such cases is "that owing to the violence applied to the head the elasticity of the skull permits a rapid alteration in its shape, while the dura mater, less elastic than the bony case, does not react so quickly and gets lacerated in consequence."

In three of his cases the main trunk of the artery was injured, in five the anterior main branch, in three the posterior main branch, and in four several of the smaller branches.

In only one of the fifteen cases was the typical sequence of symptoms present; *i. e.*, an initial period of unconsciousness due to the concussion, followed by a lucid interval and finally by a return of unconsciousness with other symptoms of compression. In eight cases unconsciousness was present from the first and continued until death occurred. In only four of the cases was paralysis limited to the side of the body opposite to that of the head lesion. In nine cases the patients were able to move all their limbs spontaneously after irritation. In six cases there was inequality of the pupils, and in all these the wider pupil was on the side of the hemorrhage, while in five of them neither pupil reacted to light. In five cases the pupils were equal and active; in two they were equal, but did not react to light. In discussing the diagnosis, Pringle draws attention to the fact that the frequent combination of brain laceration, sub-arachnoid or subdural hemorrhage more often causes general paralysis from the first than extradural hemorrhage. In two of his cases every symptom usually associated with middle men-

ingeal hemorrhage was absent until a very late stage. This was explained by a free escape of cerebrospinal fluid from the interior of the skull. In one case the patient remained conscious for four days, until three hours before death, and in the second for twelve days after the injury. In both cases the clot was over the posterior parietal region and on the opposite side to the fracture. Ten of the fifteen cases were operated on and four recovered. In the fatal cases subdural hemorrhage and brain injury were present and were apparently the cause of death.—(*Rev. of Neur. and Psych.*, May, 1906.)

Louisiana State Medical Society Notes.

In Charge of DR. P. L. THIBAUT, Secretary, 141 Elk Place.

NEXT MEETING: NEW ORLEANS, MAY 14, 15, 16, 1907.

OFFICERS—President, Dr. Henry Dickson Bruns, New Orleans; First Vice-President, Dr. Charles McVea, Baton Rouge; Second Vice-President, Dr. George F. Wilson, Bienville; Third Vice-President, Dr. A. J. Perkins, Lake Charles; Secretary, Dr. P. L. Thibaut, New Orleans; Treasurer, Dr. Jules Lazard, 830 Canal Street, New Orleans.

COUNCILLORS—Chairman, Dr. E. J. Graner, 2d Cong. Dist., New Orleans; Secretary, Dr. J. L. Scales, 4th Cong. Dist., Alden Bridge, La.; Dr. P. E. Archinard, 1st Cong. Dist., New Orleans; Dr. J. Wofford Sanders, 3d Cong. Dist., New Iberia, La.; Dr. S. L. White, 5th Cong. Dist., Ruston, La.; Dr. C. M. Sitman, 6th Cong. Dist., Greensburg, La.; Dr. C. A. Gardiner, 7th Cong. Dist., Sunset, La.

BUSINESS MINUTES, 1906 MEETING.

(Continued from last month.)

DR. THIBAUT, Chairman of the Committee on Scientific Work, presented the program for the present meeting as the committee's report.

Upon motion of DR. J. J. ARCHINARD, action on the report of the Committee on Public Policy and Legislation was deferred to enable the members to meet.

DR. THIBAUT read the REPORT OF THE PUBLICATION COMMITTEE.

NEW ORLEANS, MAY 8, 1906.

To the Officers and Members of the Louisiana State Medical Society:

GENTLEMEN:

Your Publication Committee begs to report that the transactions for 1905 were published in THE NEW ORLEANS MEDICAL AND SUR-

GICAL JOURNAL. The contract for publication was the same as the year previous, with the exception that the subject matter was published for 75 cents instead of 80 cents per page.

Of the fifty scientific papers whose titles appeared on the program, only thirty-two were furnished your committee. All of these were published in the JOURNAL from July, 1905, to April, 1906.

We find this method of publication satisfactory and beg to recommend its continuance.

Respectfully submitted,

P. L. THIBAUT, M. D.,
Chairman.

Upon motion of DR. J. J. ARCHINARD the reports of the Committees on Scientific Work and on Publication were approved.

Motion was made to defer the report of the Committee on Medical Education. Carried.

Under New Business DR. THIBAUT presented communications from two of the social clubs, The New Orleans Chess, Checkers and Whist Club, and the Young Men's Gymnastic Club, extending the courtesies of the clubs to the visiting members.

DR. DORTCH offered a resolution that the Society put itself on record as endorsing the article published in the *Ladies' Home Journal* in regard to patent and proprietary medicines.

DR. HALSEY moved, as a substitute for the resolution, that the President appoint a committee to consider the matter and report.

DR. DYER offered as an amendment that the resolution be referred to a committee to be appointed by the President, and that the first three clauses be considered merely as a preamble.

The motion as amended by Dr. Dyer was adopted.

The President stated that he would announce the committee later.

DR. PATTERSON offered a resolution providing for the change in the by-laws with reference to the Committee on Nominations, so that the committee should consist of one member from each parish.

DR. PATTERSON withdrew his resolution, and offered the same thing in the form of a motion that the by-laws be so amended as to provide for one member of the committee from each parish.

The President stated that under the rules the question would

have to lay over for twenty-four hours before action could be taken on it.

DR. CALLAN read the following report:

REPORT OF COMMITTEE ON MEDICAL EDUCATION, LOUISIANA
STATE MEDICAL SOCIETY.

To the Officers and Members of the Louisiana State Medical Society:

GENTLEMEN:

Your Committee on Medical Education begs to report as follows:

After we were appointed by your Honorable President, the Council on Medical Education of the American Medical Association forwarded us literature pertaining to medical education in the various States of the Union; also literature calling our attention to the standard now recommended by the said Council and adopted by the American Medical Association at their annual meeting at Portland, Oregon, in 1905. This standard now recommended is as follows:

1st. A high school education, or such education as will admit the student to one of our recognized universities.

2d. This requirement to be passed upon by specially designated State authorities, such as the Superintendent of Public Instruction, or his representatives, and not by the faculty of the medical school.

3d. A four years' course in a medical college, each year of at least thirty weeks, with thirty hours per week of actual work (exclusive of holidays), no two courses to be taken in the same year.

4th. The graduation from such an approved school should simply entitle the candidate to an examination before the State Examining Board.

5th. The passing before a State licensing board of a satisfactory examination and the securing of a license to practice.

It was further recommended by the Council that the effort be made to make these requirements effective by January 1, 1908.

After receiving these communications, your committee familiarized themselves with the various provisions of this standard and the requirements of the Medical Department of Tulane, and found

that, practically speaking, our college was in accord with this standard, except on two propositions.

The chairman of your committee was then instructed to solicit an interview with the worthy Dean of the Medical Department, who immediately extended us a most cordial welcome and every point was gone over with care.

On the first proposition, that of preliminary requirements, we find Tulane in accord with the standard.

On the second proposition, Tulane has usually passed on these requirements, but in deference to the wishes of the American Medical Association and with a desire to raise the standard, have not only relinquished their former custom, but have authorized us to say that these two requirements will henceforth read as follows:

REQUIREMENTS FOR ADMISSION.—Every student, before being matriculated for the first course of medical lectures, must possess the following qualifications:

15. He must submit a certificate of good moral character and fitness to enter upon the study of medicine or of pharmacy, such certificate to be signed, in the former case by a reputable physician and in the latter case by a reputable pharmacist.

16. He must submit official evidence of one of the following educational qualifications, *i. e.*: Either a diploma or an official certificate that he is:

(a) A graduate of a State university or other college of repute, or

(b) A graduate of a State normal school, or

(c) A licensed teacher of the first grade, or, as minimum qualifications:

(d) A certificate that he has passed the entrance examinations to a university or other reputable college, or

(e) That he is a graduate of a high school, or

(f) That he has had a preliminary education equal to a high school education, as certified by the State Superintendent of Public Education or one of his representatives.

While the above regulations will be strictly enforced for the session of 1907-08, yet, for the session of 1906-07, a student who may fail to submit one of the six evidences above stated, of educational qualification, will be permitted, as heretofore, to enter the first year course on submission of:

(g) A certificate from some legally constituted high school, general superintendent of State education, or superintendent of a county or parish board of public education, attesting that he has been examined and is possessed of at least the educational attainments required of first rate teachers of public schools.

17. Any student, who, during his course in this college, convicts himself of illiteracy, shall be required to remove this disability before his graduation.

On the third proposition, that which requires thirty weeks of thirty hours per week, we find that, for the session 1906-07, Tulane will demand twenty-nine weeks, but, in actual hours of work, they will exceed the nine hundred hours per session demanded by the American Medical Association standard.

In connection with this proposition, the Dean authorizes us to say that two years ago the faculty passed a resolution demanding a thirty weeks' course, which would have gone into effect this coming session, 1906-07, but for the unsettled state of the public mind in regard to the health conditions of the coming summer. We feel safe in asserting that for the session of 1907-08 that this requirement will be met.

On the fourth and fifth propositions, Tulane has always been in accord.

From our interview, we gathered the inference that the faculty is as much alive to the progress of the times and is as anxious to forward the progress of medical education as the most enthusiastic member of the American Medical Association.

Your committee, for the short time that it is in existence, feels that it brings you nothing but encouraging news and begs to assure you that at our next annual session we will furnish you a full comparative statement of the requirements of the Tulane curriculum and of the ideal standard proposed by the American Medical Association, as well as the standard now recommended by that body.

Respectfully submitted,

(Original signed)

JOHN CALLAN, M. D.,

Chairman.

ISAAC IVAN LEMANN, M. D.

J. D. BLOOM, M. D.

Upon motion of DR. OECHSNER the report was adopted, and the Secretary instructed to send a copy to the Committee on Medical Education of the American Medical Association, at Chicago.

FIRST DAY—NIGHT SESSION.

The Secretary read a report of the decision of the Council on an appeal from an expelled member.

Upon motion of DR. McVEA the report was adopted.

(To be continued next month.)

Medical News Items.

THE POCAHONTAS HOSPITAL.—The first building to be completed at the Jamestown Exposition will be the Pocahontas Hospital. Every exposition has taught the absolute necessity of a well-equipped hospital, under the charge of a competent medical director, with a staff of dependable house doctors and trained nurses.

MERGER OF THE ARKANSAS MEDICAL BULLETIN.—The *Arkansas Medical Bulletin* has been merged into the *Journal of the Arkansas Medical Society*, and the initial number is a fine one.

GRADUATES FROM NEW ORLEANS COLLEGE OF DENTISTRY.—Twenty-four graduates received diplomas from the New Orleans College of Dentistry in June at their annual commencement.

DEATH RATE OF THE CITY OF SHREVEPORT.—The death rate of the City of Shreveport in June was 12%. Negro death rate was 21% and white 6%.

MEETING OF THE AMERICAN ROENTGEN RAY SOCIETY.—The Seventh Annual Meeting of the American Roentgen Ray Society will be held August 29-30-31, 1906, at the Cataract and International Hotels, Niagara Falls, N. Y. A large and interesting program has been prepared. An interesting feature of the meeting will be the exhibit of prints and negatives. The railroads have

granted a rate of a fare and a third on the certificate plan. Full information regarding the meeting may be obtained from the Secretary, Dr. Geo. C. Johnston, No. 611 Fulton Building, Pittsburg, Pa.

OPENING OF MISSISSIPPI MEDICAL COLLEGE, MERIDIAN, MISS.—The Mississippi Medical College at Meridian, Miss., will begin its first session on October 1. The faculty includes the following: Drs. N. L. Clark, Dean, Diseases of Children; W. W. Hamilton, Obstetrics and Genito-Urinary Diseases; D. U. Wadsworth, Surgery; J. H. Blanks, Clinical and Operative Surgery; W. W. Reynolds, Anatomy; M. J. Lowry, Gynecology; O. W. Bethea, Chemistry; W. J. Anderson, Physiology and Gastro-Intestinal Diseases; B. L. Robinson, Materia Medica and Therapeutics and Rectal Diseases; J. R. Tackett, Theory and Practice of Medicine; W. H. Rowan, Physical Diagnosis and Diseases of the Chest; T. A. Barber, Eye and Ear; J. E. Seale, Nose and Throat; T. J. Houston, Genito-Urinary and Venereal Diseases; F. L. Walton, Clinical Medicine, besides the demonstrators and instructors.

EXAMINATION FOR THE U. S. PUBLIC HEALTH AND MARINE HOSPITAL SERVICE.—The United States Treasury Department announces an examination for the Public Health and Marine Hospital Service on August 6, at the Bureau of said service. Successful candidates will be numbered according to their examination results and will be assigned as vacancies occur. For further information, address the Surgeon General of the Public Health and Marine Hospital Service, Washington, D. C.

LOUISIANA STATE BOARD OF MEDICAL EXAMINERS announce that the next regular examination will be held on the 19th and 20th of October, 1906, instead of the 18th and 19th, as previously announced.

MEETING OF THE BRITISH MEDICAL ASSOCIATION.—The British Medical Association will meet in Toronto, August 21 to 25, 1906, at the University Buildings.

DEDICATION OF HARVARD MEDICAL SCHOOL.—The Harvard Medical School will dedicate its new buildings on Tuesday and Wednesday of September 25 and 26, 1906.

CLIPPING FROM BURBANK (ALA.) PAPER.—One of the great needs of Burbank is a resident physician. It is an ideal place for a sanitarium, and any doctor with small capital could succeed.

“POKER JIM.” The Monarch Publishing Co., of Chicago, Ill., announces that it will shortly issue a new book by Dr. G. Frank Lydston, which will undoubtedly be of interest to the medical profession. The book is called “Poker Jim,” and will be ready for distribution on or about August 1.

PERSONALS: Dr. Charles McVea, of Baton Rouge, has been elected Surgeon of the University.

DR. P. L. REISS left recently for a trip to Europe. Dr. H. N. Blum is taking his place during his absence.

DR. SAM CORLEY has moved from Clarkesville, Texas, to Abilene. Dr. Corley is one of the JOURNAL'S old friends, and we wish him success in his new location.

DR. S. V. BARTON has moved from Palestine, Texas, to McAlester, I. T.

DR. J. A. BLANCHARD has been elected City Health Officer and President of the Board of Health of Shreveport.

THE NEXT NEW ORLEANS BOARD OF HEALTH, recently elected by the City Council, will consist of the following members: Dr. W. T. O'Reilly, President; Drs. W. A. Gillaspie, O. F. Ernst, W. H. Robin and Mr. T. A. Wainwright.

DR. E. MOSS has returned to New Orleans after a few weeks' vacation.

THE AVOYELLES PARISH MEDICAL SOCIETY met in regular quarterly session at Mansura on the evening of July 5, with a good attendance present. The application of Dr. S. D. Porter, of Moreauville, was received and he was elected to membership. The reading of scientific papers was postponed until after the usual banquet, during which time a general discussion of medical subjects was declared in order. Dr. W. F. Couvillion related a case of uncinariasis, which was discussed by Drs. Fox, Regard, C. J. Ducote, S. J. Couvillion and Porter.

DR. G. R. FOX reported a case of tracheloraphy performed under spinal cocainization. The same physician related the successful

use of hypnosis in cases of prolapsus of bowel and instrumental dilatation of the cervix.

After supper, Dr. Thos. A. Roy read a paper on "Abortion." A general discussion by the society followed. Dr. S. D. Porter reported a case in his practice of an abortion six weeks after delivery of a full term child. The foetus was about three weeks. Dr. C. J. Ducote next spoke of the birth of an apparently full term child within a few days of being nine months of the birth of a previous child. These cases would suggest that President Roosevelt's ideas on race suicide are being disseminated in Avoyelles Parish.

Moreauville was selected as the next meeting place. The subject of Intestinal Parasites will be discussed.

Dr. E. DeNux was appointed essayist. Dr. L. C. Tarlton will open the discussion. At 1:15 the Society adjourned.

MARRIED: The wedding of Dr. John Phillips Leake to Miss Belle Reed, took place on June 23, 1906.

Dr. H. Weston and Miss Susie Tuberville were married on June 30. Dr. Weston is a resident of Bay St. Louis, Miss.

DIED: Dr. Manuel Garcia, a celebrated singer and inventor of the laryngoscope, died July 1, 1906, in London, aged 102 years.

Book Reviews and Notices.

All new publications sent to the JOURNAL will be appreciated and will invariably be promptly acknowledged under the heading of "Publications Received." While it will be the aim of the JOURNAL to review as many of the works received as possible, the editors will be guided by the space available and the merit of the respective publications. The acceptance of a book implies no obligation to review.

A Pocket Formulary, by E. QUIN THORNTON, M. D. New (Seventh Edition, Revised. Philadelphia: Lea Brothers & Co.

As a rule, we deprecate the use of cut and dried prescriptions by the physicians. However, we think that the use of a formulary such as this is far preferable to the prescribing of the many so-called proprietary medi-

cines which are being heaped upon the medical profession, and are, unfortunately, being prescribed by many. For, by prescribing according to the formulas contained herein, the practitioner will at least know what his patient is taking.

STORCK.

Differential Diagnosis and Treatment of Disease, by AUGUST CAILLE, M. D.
New York and London: D. Appleton & Co., 1906.

This work of Dr. Caillé is a distinct departure from the stereotyped works on practice, and has a peculiar merit of its own—*i. e.*, in emphasizing the points in differential diagnosis, and in elucidating many of the manipulations used by specialists and thought to be peculiar to them. We are sure that a careful study of this book will assist the general practitioner to treat successfully many cases which he feels constrained to refer to some specialist.

STORCK.

A Manual of Diseases of Infants and Children, by JOHN RUHRAH, M. D.
W. B. Saunders & Co., Philadelphia and London, 1905.

A large amount of material is compassed within the 400 pages of this handbook, which has the additional recommendation of being clear and well presented. The subject matter is arranged in sections, each division being subdivided into its proper parts. Illustrations are numerous and well placed. The chapters of especial commendation are those on Infant Feeding and on Acute Infectious Diseases. The book concludes with a chapter on Therapeutics, which gives many valuable suggestions. With regard to diseases of the skin only a limited number are referred to, as might be expected in so comprehensive a text. Altogether the work is one to be commended.

DYER.

Perjury for Pay, by WILLIS P. KING, M. D. The Burton Co., Kansas City, Mo., 1906.

The author of this text has already attracted some attention as an alienist, and it is a privilege to review the present work, which aims at the recognition of impositions practiced in the courts by those who pretend to suffer injuries at the hands of corporations. This text attacks many of these injuries, and, aside from being a work of education, it is made readable by the relation of actual occurrences in the experience and under the observation of the narrator.

DYER.

A Manual of Materia Medica and Pharmacognosy, by LUCIUS E. SAYRE, B. S., Ph. M. Third Edition, Revised with *Histology and Micro-technique*, by WILLIAM C. STEVENS. P. Blakiston's Son & Co., Philadelphia, 1905.

The pharmaceutical student will find this work of particular value, as will also the medical student who desires more information about a drug than its name, its dosage, and its therapeutic uses. This work gives good descriptions of all drugs usually employed in the practice of medicine. The advances in pharmacognosy have been rapid in the past few years, and especially is this true of one of its branches, histology. It is well for the advanced student to have a work of this character at his command.

STORCK.

Lectures on Tropical Diseases, by SIR PATRICK MANSON. W. T. Keener & Co., Chicago, 1905.

It is with the most genuine pleasure that we mention and recommend this book to our class in the New Orleans Polyclinic. It contains the lectures, being the Lane Lectures for 1905, delivered at Cooper Medical College (San Francisco, U. S. A., August, 1905), by Sir Patrick Manson, whom we call in all sincerity, without emphasis, a genius in tropical work. If any book is needed right here, it is this very book, the very fine book before us now.

E. M. D.

The Physical Examination of Infants and Young Children, by THERON-WENDELL KILMER, M. D. F. A. Davis Company, Philadelphia, 1906.

This is a good specimen of the kind of books that can be produced with the greatest profit to the professor, by inserting a profusion of pictures. Many need to learn the essentials on this subject; indeed, many in so called official positions, as the care of hospital wards, in which we have seen ignored the manner of collecting the urine of infants.

E. M. D.

Manual and Atlas of Dissection, by SIMON MENNO YUTZY, M. D. P. Blakiston's Son & Co., Philadelphia, 1906.

This volume will be found a handy aid to dissection, and should therefore be welcomed by medical students. Its chief feature lies in the fact that it deals with regional dissection, one region being demonstrated at a time. The illustrations, numbering three hundred and fourteen, are reproduced from the well-known works of Morris and Holden.

LARUE.

Publications Received.

P. Blakiston's Son & Co., Philadelphia, 1906.

Eczema, by Samuel H. Brown, M. D.

A Compend of Pharmacy, Quiz-Compend, by F. E. Stewart, M. D.

The Grafton Press, New York, 1906.

A Compend of Operative Gynecology, Bainbridge-Meeker.

Lea Bros. & Co.

Progressive Medicine. Hare-Landis. Vol. VIII, No. 2, June, 1906.

J. P. Lippincott Co., Philadelphia and London, 1906.

The Eye and Nervous System. Edited by Drs. Wm. Campbell Posey and Wm. G. Spiller. (With contributors.)

McClure, Phillips & Co., New York, 1906.

Walter Reed and Yellow Fever, by Dr. Howard A. Kelly.

MORTUARY REPORT OF NEW ORLEANS.

(Computed from the Monthly Report of the Board of Health of the City of New Orleans.)

FOR JUNE, 1906.

CAUSE.	White.	Colored.	Total.
Typhoid Fever.....	6	2	8
Intermittent Fever (Malarial Cachexia)	4	3	7
Smallpox.....		3	3
Measles.....			
Scarlet Fever.....	2		2
Whooping Cough.....	1	1	2
Diphtheria and Croup.....	1		1
Influenza.....	1		1
Cholera Nostras.....	1		1
Pyemia and Septicemia.....			
Tuberculosis.....	43	52	95
Cancer.....	16	5	21
Rheumatism and Gout			
Diabetes			
Alcoholism	3	1	4
Encephalitis and Meningitis.....	7	2	9
Locomotor Ataxia.....			
Congestion, Hemorrhage and Softening of Brain.....	21	12	33
Paralysis	3	1	4
Convulsions of Infants	2	2	4
Other Diseases of Infancy	22	8	30
Tetanus.....		3	3
Other Nervous Diseases.....	2		2
Heart Diseases.....	35	26	61
Bronchitis	2	3	5
Pneumonia and Broncho-Pneumonia.....	11	12	23
Other Respiratory Diseases.....	3		3
Ulcer of Stomach.....	1		1
Other Diseases of the Stomach	5	1	6
Diarrhea, Dysentery and Enteritis.....	84	33	117
Hernia, Intestinal Obstruction.....	3	2	5
Cirrhosis of Liver.....	11	3	14
Other Diseases of the Liver	1	1	2
Simple Peritonitis	2	3	5
Appendicitis.....	4	1	5
Bright's Disease	20	24	44
Other Genito-Urinary Diseases.....	5	3	8
Puerperal Diseases	3	2	5
Senile Debility	18	8	26
Suicide	7	3	10
Injuries.....	26	29	55
All Other Causes.....	18	10	28
TOTAL.....	394	259	653

Still-born Children—White, 19; colored, 26; total, 45.

Population of City (estimated)—White, 245,000; colored, 88,000; total, 333,000.

Death Rate per 1000 per annum for Month—White, 19.29; colored, 35.32; total, 23.59.

METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmospheric pressure 29.94

Mean temperature 83.

Total precipitation 4.39 inches.

Prevailing direction of wind, south.

New Orleans Medical and Surgical Journal.

VOL. LIX.

SEPTEMBER, 1906.

No. 3

Original Articles.

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. A complimentary edition of one hundred reprints of his article will be furnished each contributor should he so desire. Covers for same, or any number of reprints, may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

Louisiana State Medical Society Proceedings.

(EDITED BY PUBLICATION COMMITTEE).

P. L. Thibaut, M. D., Chairman.

Address on Sanitary Science and Quarantine.

By DR. FRED. J. MAYER, Scott, La.

I did not decide to submit a written report to your honorable body until this evening, for the reason that the responses for contributions to a "Symposium on Yellow Fever" were so generous, and from such high sources, that I thought the time would be fully occupied by papers which would bring out the points that should be accentuated at this meeting. Some of these papers have been assigned to other sections without my knowledge, so that it will be a difficult task to focus the entire range of discussion upon the one important point: The sanitary control of

yellow fever. Pardon, therefore, the crudities of this hurriedly-prepared report, the only object of which is to start discussion along certain lines that should not be overlooked.

Among those who responded are Drs. Patton and Sexton, of Orleans, with papers on the "Differential Diagnosis Between Yellow Fever and Dengue," and "Some of the Difficulties in the Diagnosis of Yellow Fever"; "The Mosquito Doctrine," by the famous Carlos Finlay, of Havana, who by a beautiful process of inductive reasoning showed that the *stegomyia fasciata* stood in an immediate constative relation to yellow fever. I will read you his letters accounting for his regretted absence to-night.

Drs. Brady, White, of the A. P. H. and M. H. Service; and Guthrie and Bernard, are down for papers setting forth their experiences. Drs. Gaines, of Tallulah, and Nolte, of New Orleans, by some inadvertence, have been left off the program. I ask unanimous consent that any contribution to the epidemic literature of 1905 from them be accorded a place in the proceedings.

Dr. W. H. Sanders, the distinguished Chief Health Officer of Alabama, early consented to read a paper on "Co-operation Among the Southern States in the Prevention and Control of Epidemics." Dr. Sanders was under the impression that his paper would fall on Wednesday, so he will not be in until this evening. If he fails to appear to-night I will ask that his paper, which will be of equal interest to the general public, be assigned a place on the Wednesday night program. After the annual oration Dr. Jones will read on the important subject of "Isolation Hospitals."

It affords pleasure to see on the program a paper by Dr. James Carroll, of Washington, D. C. I need not remind you that the transmission of yellow fever by the *stegomyia* was first proven in the person of Dr. Carroll, who heroically submitted to the bite of an infected mosquito August 31, 1900, developing a marked case, which came near proving fatal. You will also note valuable contributions by Drs. Bruns, Dupaquier and Magruder, and a paper which belongs to this section by J. C. Smith, of Orleans, who has a world-wide fame as a scientist and an original investigator. Mr. Smith made, during the winter, some observations of great importance to the practical sanitarian, having successfully bred *stegomyia* in water almost as salty as the English

Channel, proving, beyond the peradventure of a doubt that mosquitoes, like every other living thing in nature, in the struggle for existence accommodate themselves to their environment, and that our sanitary duty does not end with screening of cisterns, but in thorough drainage, sewerage and paving, reclamation of all waste watery places, and where this is not feasible, stocking with larvae feeding fish, or covering with crude oil, to the end that this pestiferous inhibitor to the proper development of the magnificent resources of the State shall be relentlessly warred upon, from egg to adult. Reed pointed out that *stegomyia* would deposit in water to which offal matter had been added; this may necessitate, after cisterns and other fresh water containers are screened, the fumigation and oiling of sewers. Whatever the cost and the trouble, *stegomyia* must be exterminated in this city if New Orleans ever hopes to fill the lofty destiny her unrivaled position and opportunities entitle her to. In the discussion which will follow the reading of these valuable papers I earnestly urge the accentuation of the following: 1. The necessity of screening all fever cases from the 15th of March until the end of November, at least during the first 4 days of the fever, so that in the event that Doctors disagree as to diagnosis no chances be taken and the danger circumscribed by a bar in the event that it should turn out to be a case of yellow or malaria fever; and for the further reason that if this practice becomes universal patients will lose that dread which many entertain, viewing a simple netting as a death warrant, within whose meshes are interwoven the sentence: Whosoever crawls under here leaves hope behind.

2. The absolute necessity of reporting first cases of a suspicious nature to the Health Authorities, so that the fire may be quickly extinguished before it bursts into a conflagration. This body owes it to itself to place on record by formal resolution its disapprobation and condemnation of concealment of yellow fever cases, and any physician guilty of the same should be forever barred from membership in this ancient and honorable body.

As to the concealment by Health Authorities in obedience to a domineering and insistent commercialism, that would not hesitate to sacrifice whole hecatombs of lives to a sordid shekel, language is simply inadequate to express the infamy of the act. The

commercial interests have certain well-defined rights, and among these it has a right to demand that there shall be no senseless and unscientific embargo on commerce, nor even a scientific quarantine, *based on empty rumors or faulty diagnosis*. The worse feature of every epidemic is the panic that ensues, with the long train of inhumanities that follow. The future prosperity of the State requires that these shall cease.

3. The length of time an infected mosquito can live and remain perniciously active. According to John Guiteras, of 11 infected *stegomyias* 7 lived 64 days and one 154 days in captivity.

4. The exact period in man during which yellow fever can be transmitted to the mosquito. While all mosquitoes infected in the experiments made were within the 3-day limit, I have seen no proof that they could not be infected at a later period.

5. The minimum period after a mosquito feeds upon a yellow fever patient that it can convey the disease to man. The minimum of 12 days set by the late lamented Reed should be more fully investigated and as temperature enters as a factor, the observations should include winter and summer temperatures, dry and wet seasons.

6. Whether the 25 varieties of *stegomyia*e, classified by Theobald, can convey the fever.

7. To determine the distance that *stegomyia*e can be air-borne by land and sea. Fifteen hundred feet is probably the limit by sea, and 300 feet by land.

8. To determine whether *stegomyia*e are ever conveyed by freight or passenger cars and coaches. I have observed them in both.

9. The length of time that eggs will preserve their vitality; Reed having hatched out eggs 90 days old, and observing that freezing does not destroy their vitality. Also the amount of freezing that larvae will stand.

10. Is the oft repeated assertion that the *stegomyia*e is a day mosquito correct, and have we all these years drawn our mosquito bars at night against imaginary bites?

11. Are animals, and particularly dogs, capable of contracting and transmitting fever? If they do there is room for a curtailment of canine tramp privileges..

12. The shortest and longest period of fever incubation in man.

A female child, aged 10, left Mandeville (said to be free of yellow fever) on the 16th of September, 1905, at 8 o'clock a. m., passed through the infected district via Pontchartrain R. R., had a chill a 5 o'clock p. m., and developed a classical case. If there was no fever in Mandeville (?), as asserted, the period of incubation in the child was about 8 hours, while French observers claim the period of incubation in rare cases reached 25 days, a period of 6 days and a few hours would cover the limit of the vast majority, 13 per cent, I think Carter admitted, developed after 5 days—too large a percentage to base quarantine restrictions on a 5-day detention, unless exceptionally prepared to receive all cases in a properly constructed isolation hospital. The first cases in New Orleans in 1905 may have been contracted from cases where the fever broke out after the fifth day, all the quarantine requirements of the Federal and State Health Service having been honestly complied with.

13. The energies of our scientists should be bent to discover a reliable, harmless and inexpensive culicide. Experiments seem to show this to have been attained by City Chemist Mims; SO_2 , as ordinarily used by the pot method, is not reliable, having a higher Sp. gravity than atmospheric air, it settles in a stratum near the floor, the mosquito, in the struggle for existence rises and frequently escapes destruction unless the fumigation is prolonged or the fumes distributed by a fan. Besides, its corroding and bleaching qualities will never popularize it. Pyrethrum powder is an expensive delusion and a snare, simply stupefying the mosquitoes, who quickly reawaken to pernicious activity. Any culicide not absolutely effective is worse than none at all, for it gives rise to a fancied security from which there may be a rude and fatal awakening.

The most important question that confronts this State is: Shall we voluntarily surrender to the General Government our last reserved sovereign police power? This will be handled at length by Dr. Sanders, so I will not dwell upon it further than to say that the unbroken line of decisions of the Supreme Court of the United States, including that of Chief Justice Marshal (himself a Federalist) has been against any such usurpatory action. The very suggestion is fraught with the gravest danger to the commercial future of our State. New Orleans standing upon

the threshold of a commercial expansion that will be unrivaled in the history of modern cities, exhibits on the part of her business men a short-sightedness inconceivable when they are willing to imperil this expansion by placing in any one hand an inhibitory instrument which, if improperly applied, may absolutely crush any hope of commercial supremacy. If our State officials are at any time remiss in their duties they can be speedily removed, but a Federal officer is a fixture, and the red tape of the department will strangle our commercial hopes, while, judging the future by the past, will fail to give the same degree of security to the health interests of the State that the agents of the State can be forced to give in the event that they should prove recreant to their sacred trust. If the Federal health service is so extremely solicitous of the sanitary welfare of the State they could place competent officers of their service at different quarantine stations, to exercise any sanitary surveillance granted them by law, without usurping the functions of the State. This would afford the maximum of sanitary protection, with the minimum of commercial hardships to our rapidly expanding commerce.

DISCUSSION.

DR. B. C. LEBLANC: I have not prepared a written discussion of this subject. It has been so thoroughly discussed that there is very little to be said.

The subject of quarantine is important. If yellow fever occurred again this year, quarantine would be the first question to be raised. We all remember the rigid shotgun quarantine.

My idea is that as soon as we have made a diagnosis we should put that patient under screen, and quarantine simply that block. I would allow the people to go into the city to attend to their business, but would allow no one to enter that house. In the country have just the one house screened. Certificates should be recognized by other places.

As to fumigation, in the cases where pyrethrum was used for half an hour, it intoxicated the mosquitoes, and you would find them on the floor, but they would rise again. However, after burning sulphur for five or six hours they were destroyed. We had trouble in fumigating, because they were cabins and needed

shingles more than fumigation sometimes. We sometimes had to stretch a mosquito net of cheap cheesecloth over the whole house, simply envelop it, and then put a sulphur pot inside and under the house. We found a good many mosquitoes outside of the house, and in the nets would frequently find mosquitoes where we thought the house had been thoroughly screened. Prior to using a net we simply fumigated the house, and in four or five days yellow fever would develop in the next house. After we commenced using this net we had better success. In fact, completely stamped the fever out in a short while.

DR. CALLAN: The discovery of the *stegomyia fasciata* as the transmitting agent of yellow fever, as announced by Reed and Carroll, was received with a degree of skepticism which resulted in working parties and commissions composed of the highest attainable skill in scientific medicine critically reviewing the work, looking for fallacies in the experiments, and also looking for other causative agents; but, singularly to relate, the results were as constantly the same as a mathematical deduction. Scientists who began their investigations as skeptics completed them as confirmed mosquito men.

The correctness of the work of Reed and Carroll have now been confirmed by the work of John Guiteras in Cuba, by the M. H. S. working parties Nos. 1 and 2 in Vera Cruz, by Ribas and Lutz of Brazil, by the French commission from the Pasteur Institute (Marchoux, Simond and Salembien) in Rio de Janeiro, and by the German commission (Otto and Neuman) also in Rio, and on a large scale by the work done in Havana and in New Orleans.

It is unfortunate that the parasite of the disease has eluded the untiring work of our most skilled microscopists. When it is found then many obscure points of diagnosis, and perhaps of treatment, will be made clear.

To protect communities it is our duty as physicians to so cultivate our powers of observation, to gain an early recognition of the disease, to promptly screen cases in which there is the shadow of a doubt; to promptly report to the constituted authorities the slightest suspicion; and to urge the people to destroy the mosquitoes.

As long as New Orleans harbors the *stegomyia* it is infectible

territory; but that yellow fever, even in its mildest form is perennial to New Orleans, can now be proven untrue. The stegomyia is a delicate insect. The mildest winters of New Orleans are sufficient to drive her into hibernation. The infected mosquito either dies during hibernation or is able to purify herself then.

I do not believe that mosquitoes, hatched in the spring, from eggs lying dormant all winter, from an infected mother, can transmit the disease.

If these propositions are not correct then New Orleans would now be exhibiting cases of yellow fever in large numbers, because the stegomyia has for the past several weeks been working overtime.* Any recurrence of yellow fever in New Orleans in the year following an epidemic has always been late in the year, and not in the spring or early summer months, as would be if the infected mosquito could survive and retain her poison, or transmit it to the eggs that lie dormant during the winter. Recrudescence of yellow fever in New Orleans means nothing more nor less than reimportation.

A new water supply, a sewerage system, a better drainage system, and paving of the streets, will make New Orleans an open port, for then there will be no stegomyia here, and without stegomyia there can be no yellow fever.

Yellow Fever in New Orleans, and Its Bearing Upon The Health of the State.

By DR. JAMES CARROLL, U. S. Army, Washington, D. C.

I find that if I were to follow my original intention of discussing in detail the epidemics of yellow fever that have occurred throughout this State, the task would be one of many months, and perhaps a year. The objects of this meeting, as I understand them, are to place before the members of the profession of the State the known facts and observations on yellow fever that have a direct bearing upon our views in regard to the cause of the disease and the manner in which it can be controlled. I shall limit myself, therefore, to a brief review of the outbreaks that have taken place, particularly in this city, and shall endeavor to lay stress upon those points which are of practical value to us to-day.

* Stated in May, these have all the more force now. **EDS.**

It is impossible to exaggerate the importance to the city and to the State of a clear knowledge on the part of the members of the medical profession of the relation that New Orleans has borne to the importation and dissemination of the disease in the past. As we look back over the literature to-day, it becomes perfectly plain to us that yellow fever has been imported into this city from adjacent countries year after year, and that nearly all the serious epidemics of the South can be traced directly or indirectly to importation by way of New Orleans. There were exceptions, of course, but these exceptions do not alter the general proposition. Long before the enunciation of the mosquito theory it was asserted over and over again by men of wide experience and unimpeachable integrity that the epidemics, both small and large, occurring in the adjacent towns and cities could, in every case where it was possible to trace them, be shown to have come from this city. Indeed, as I shall show later, the very fact that none of these localities were known to harbor the disease until after it had first appeared in New Orleans, was held to be fairly conclusive evidence that in New Orleans itself the disease must be imported, because, during certain months in the year the city invariably became free from it, and it was quite clear that yellow fever never made its appearance in this city until after it was known to exist in the adjacent countries with which she was in direct communication.

The city of New Orleans owes it to herself, to the State of Louisiana, and to the whole United States, that she shall prevent the importation of yellow fever upon vessels arriving from infected ports. To do this effectually her health officers must receive the moral support of the profession throughout the State, and through them of the whole population. Her future prosperity and the best welfare of the State depend to some extent upon their faithful performance of these duties. Further, the whole United States have a right to expect that this duty shall be fully and faithfully performed, for carelessness in the enforcement of the most simple measures may bring disaster upon your neighbors as well as yourselves. I purpose to show that if the proper measures are undertaken and conscientiously carried out, it is neither difficult nor costly to protect the inhabitants of your own and the adjoining States from such disasters, which are now to be classed as easily preventible.

The records show that in this city alone nearly 45,000 lives have been sacrificed to yellow fever, and the pecuniary and moral losses are beyond calculation. According to the Board of Experts appointed by Congress to investigate the epidemic of 1878, and of which the honored Dr. Stanford E. Chaillé was secretary, the losses to New Orleans from that epidemic alone amounted, at a moderate estimate, to over fifteen and a quarter millions of dollars. Her previous losses must have been appalling, and the effect upon her commerce may be judged from a table given by La Roche, who shows that from 1817 until 1854 she was exempt from yellow fever in only four years, viz., in 1818, 1821, 1851 and 1852, and her escape in these years seems very doubtful, if not disproved.

It is recorded that yellow fever made its first appearance in New Orleans in 1796, at a time when extensive excavations had recently been made for the canal, and for this reason the sickness was attributed to the overturning of the soil. But, according to a statement in the Louisiana Courier of November 27, 1820, it was traced to a vessel that had brought it in. (Cited by Dr. W. M. Carpenter in his sketches from the history of yellow fever, New Orleans, 1844.) This assertion is confirmed by Townsend in his "Account of the Introduction of Yellow Fever into Pensacola and New Orleans in the year 1822," in Number 8, Volume II, of the *New York Medical and Physical Journal*, published in 1823. After 1796, according to Carpenter, yellow fever appeared again in New Orleans in 1805, 1809, 1811 and in 1817. He states that in consequence of the positive proofs of the importation of the disease in the latter year a quarantine law was passed by the Legislature. In 1818 this law was repealed, though no epidemic had taken place, and there had been no opportunity to test its value. In 1819 the disease was again imported on vessels from Havana and Martinique, and as these vessels were allowed to enter the harbor and even permitted to moor at the levee, an outbreak soon appeared on the vessels in the harbor and extended to the city. Carpenter cites from the *New Orleans Gazette* of January 7, 1820, a further statement that the disease became epidemic and highly malignant before the middle of August, that the physicians were baffled and multitudes of victims were carried to their graves. In this year

the city of Natchez also suffered an epidemic, through the introduction of the infection from New Orleans. In August, 1822, yellow fever was brought to Pensacola from Havana, and became epidemic about the 20th of the same month. In the latter part of the months patients suffering from the disease gained entrance to New Orleans. A considerable number of infected vessels are said to have been admitted to the quarantine ground. A severe epidemic followed, with more than 800 deaths. The fact is noteworthy that the health officer called upon the Legislature for means to prevent intercourse with the large number of infected vessels arriving at the quarantine station. In the following year, 1823, cases are reported to have occurred among the shipping in the harbor early in August, and at about the middle of the month it was again introduced into Natchez from New Orleans, with the result that it became epidemic there in the early part of September. From Natchez it was carried to Coonville by families who fled from that city. In July, 1824, a schooner from Havana, with two cases of yellow fever on board, was towed to New Orleans. The tug was lashed to the side of the schooner and intercourse between the vessels was unrestricted. A few days later cases appeared on the tug, and subsequently in the city. In 1825 New Orleans again became infected, and from there the disease was again carried by steamboats to Natchez. And so one might recite the appearance of yellow fever in New Orleans year after year, and its frequent conveyance from there to adjacent towns with which she was in communication. The appearance of yellow fever in New Orleans was invariably secondary to its appearance in adjacent countries with which she maintained intercourse, and from which vessels had arrived previous to the outbreak. Large influxes of non-acclimated strangers into New Orleans during the warm season were very apt to be followed by the appearance of yellow fever in epidemic form. The reason for this is obvious. A large proportion of the permanent inhabitants had been infected and had become immune, and it frequently happened that no epidemic followed upon the introduction of cases of the disease, although infected mosquitoes, according to our present knowledge, must undoubtedly have been present. For example, we are told that in 1829 the political revolution drove many Spaniards from Mexico to New Orleans. From here, on account of the presence

of yellow fever, they fled to Baton Rouge, where many of them died of it, and the disease was communicated by them to the resident population, who suffered a heavy mortality.

Before going further let us consider the condition of the city at about 1820, near the time when the first epidemics were recorded. We are told that the site of the city was a swamp several feet below the level of both the river and the lake. The streets were unpaved and uncared for, so that in the rainy season they became practically impassable from mud. Open gutters existed on both sides of the streets, and in the poorer portions of the town these contained filth and garbage. According to Dr. Harvey E. Brown, it was stated in 1822 that "The poorer classes of the population, especially the foreigners from the south of Europe, called here 'dagos,' lived in narrow streets, in crowded houses, in the French quarter, under most unfavorable hygienic conditions; and it is in this quarter that yellow fever has oftenest committed the greatest ravages, especially in those streets in the vicinity of the docks." Compare this general statement with the conditions that prevailed here during the epidemic of 1905, and we find that the latter outbreak was practically confined to the Italian and Sicilian portions of the population. This is significant, because it indicates the possession of a fairly high degree of immunity by the more permanent inhabitants of the city, and it emphasizes the necessity for vigilance in closely observing the foreign immigrant population in order that cases occurring among them may be promptly isolated and measures be taken to prevent the spread of the infection.

In 1822 yellow fever was again introduced by the shipping, and in an account of the epidemic of 1824 we read that the disease was brought in by tugboats which it was the custom to lash abreast of the incoming vessels, "thus receiving the infection, and in turn communicating it to the city." I take the last statement from the published documents relating to the introduction of yellow fever into New Orleans in 1824, which show further by the sworn statements of passengers and crews that the first cases subsequently appearing in the city occurred on the tugboats referred to. The whole history of yellow fever is simply a repetition of similar facts, viz., the introduction of the disease by shipping, from ports in which it was already prevailing, and the records to this effect

are so convincing that in considering them the mosquito theory need only be mentioned for its probability to become apparent at once.

In describing the epidemic which prevailed in this city during the fall of 1833, Dr. Edward H. Barton, quoting Diemerbroeck (1722) who observed an uncommon abundance of insects before a pestilence, called attention to the fact that Dr. Rush and many others in this country had made similar observations. He himself remarks "that the flies and mosquitoes particularly were unusually numerous preceding the epidemic—the latter continued throughout the season." On the following page he calls attention to the long continuance of the easterly winds and he notes, "These winds uniformly exasperated the yellow fever, and if they do so, they can surely tend to produce it. The truth is, that during the great epidemics of 1800 and 1819 these winds prevailed constantly for a period of three months." Here then, in this city, forty-seven years before Finlay took up the mosquito theory, it was noted particularly that before the epidemic mosquitoes were unusually numerous, and that during the epidemic steady easterly winds prevailed and the mosquitoes continued.

The statements of Barton show that he believed the infecting agent or poison resided in the atmosphere, for he makes the interesting assertion that "our life, death and existence in every variation and graduation are dependent upon the condition of the atmosphere in which we live, move and have our being." And he further remarks, "How important then to study its character, to understand and modify its influence, and prevent and cure the diseases incident to its quality and vicissitude." His anticipation of the present aim of the preventive measures of modern medicine directed against the presence of hostile agencies in the atmosphere sounds like a prophecy.

The more one studies the older history of yellow fever, the more convinced one must become of the truth of the mosquito doctrine, and of the fact that the disease has probably, almost without exception, been imported annually into this city upon the shipping. As a singular coincidence, the first volume I pick up after writing the above is Vol V. of the *New Orleans Medical News* for 1858-59, and the first paper that attracts my attention is a clinical report of a case of yellow fever admitted to Charity Hospital in the

service of Professor E. D. Fenner on July the 8th, 1858. This was the year of a great epidemic that carried off nearly 5000 persons. The statement in the first paragraph of the report, that the patient had been occupied on a towboat during the past ten months shows the usual relationship between the disease and the shipping. In this case it is the more interesting because this was one of the earliest cases, and the epidemic had not yet declared itself.

In the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL, Vol. IV, No. 5, for March, 1848. there appeared a most remarkable paper by Josiah C. Nott, of Mobile, Ala. This paper antedates Dr. Finlay's first publication on the mosquito theory more than thirty years, and as time goes on it will attract more and more attention, because in the first paragraph he stated that he proposed to give the result of his observation on the peculiar habits of what might be called the natural history of yellow fever, and his reasons for supposing its specific cause to exist in some form of insect life. He discusses malaria for the sake of illustration, but begs it to be borne in mind that yellow fever is the subject before him. He then goes on to say:

"The morbid cause of yellow fever is not amenable to any of the laws of gases, vapors, emanations, etc., but has an inherent power of propagation, independent of the motions of the atmosphere, and which accords in many respects with the peculiar habits and instincts of mosquitoes."

He observed in Mobile that persons who became infected in certain districts and carried the infection to other parts of the city, did not communicate the disease to others, and he remarked that the disease "traveled day by day for weeks, progressing from point to point, like the army worm through the cotton region." He called attention to the observations made in Philadelphia and New York that the disease started from a single focus at different extremes of the town, and that after hanging about the point of origin for a short time, it took up its march and progressed steadily and slowly for a month, until it overspread one-half the town, without being stopped by variations of weather. He further remarked that the disease possessed an inherent power of reproduction and of progression (local) and alluded to the similarity be-

tween the migrations and other habits of yellow fever and those of some insects. He noted that the influences of meteorological conditions upon yellow fever were the same as upon the periodic fevers; that their progress was impeded by rains and finally arrested by a killing frost, as with insect life. Its progress was usually arrested by water but not by rows of trees, houses, etc. In discussing instances where yellow fever had been known to cling to one end or one side of the ship, he called attention to the correspondence of this condition with the habits of certain insects which might readily attack a part of a ship, tree, etc., a condition which could not be imagined of gases or emanations. In the continued discussion of his fifth proposition that, like in the periodic fevers, the miasms which produced yellow fever might also be transported by the winds, but that in the latter case their deleterious action did not extend so far, in speaking of the ascent of hills by malaria, which had been explained upon the theory that the poison was contained in the dews and fogs and was transported in that way, he remarked:

“It would certainly be quite as philosophical to suppose that some insect or animalcule, hatched in the low land, like the mosquito, after passing through its metamorphoses, takes flight, and either from preference for a different atmosphere, or impelled by one of those extraordinary instincts which many are known to possess, wings its way to the hill-top to fulfill its appointed destiny.”

Is not that a statement of the mosquito theory of the transmission of yellow fever after he had already warned us to bear in mind that yellow fever was the subject before him? I cannot follow his remarks in detail because time will not permit, but I will quote a few of his assertions to show how clear and accurate were his views, and how he appeared to have fully grasped the whole truth more than fifty years before his theory was established by actual proof:

“It is a well known fact that the miasms which produce periodic fevers, are infinitely more active in the night than the day. Those which give birth to yellow fever possess likewise extraordinary power of action when the sun is below the horizon.* * * I am satisfied that persons often take yellow fever by coming into

Mobile during the day for an hour or two, though the risk is much greater at night. * * * All the attempts heretofore made to account for the greater activity of the morbid cause of yellow fever at night have failed, and in my humble opinion the fact may be much better explained by a reference to the habits of insect life. Many of the infusoria, as well as insects proper, are rendered inactive by too much light, heat and dryness. They remain quiet through the day, and do their work at night. The moth tribe, the night mosquitoes, and many of the aphides are familiar examples. * * * All writers are agreed on the fact that a very imperfect barrier will obstruct the progress of marsh miasma—a row of houses, or of trees, etc., will often effectually protect dwellings from the access of this fatal poison. I have been able in my researches to discover no facts of this kind in connection with yellow fever, and my personal observation repudiates them in toto.”

The next remark (p. 588) has an important bearing upon the statement already quoted in regard to the mosquito (pp. 580-1) for it shows clearly and unequivocally that yellow fever and not malarial fever was the disease he had in mind, and the one to which the statement was intended to apply.

“The insect theory is perhaps as applicable to periodic as yellow fever.” (Note that he applies the insect theory primarily to yellow fever and only secondarily to periodic fever.) * * * We can well understand how insects wafted by the wind (as happens with *mosquitoes*, flying ants, many of the aphides, etc.) should haul up on the first tree, house or other object in their course, offering a resting place; * * * If these emanations are attracted by and attached to trees, how do they get loose again and come down to attack persons in lower stories? * * * These miasms must have some power, *per se*, of migrating, and clustering in trees, else these facts could not exist.”

In discussing the non-contagiousness and the transportability of yellow fever, he says:

“The insect theory here again comes to our aid, and may explain the difficulties which have much perplexed writers on contagion. No reasonable man in the present state of facts, can assert positively that yellow fever may not under peculiar circum-

stances be transported. I have shown that yellow fever often commences in a point from which it gradually extends from house to house for several weeks—now it is clear, that in this case there must be a local, though invisible cause—it cannot exist in the atmosphere, as it could not, if thus diffused, be confined to one point.

* * * It is probable that yellow fever is caused by an insect or animalcule bred on the ground, and in what manner it makes its impression on the system is but surmise—unless the animalcule is, like that of *Psora*, bred in the system, we could no more expect it to be contagious than the bite of a serpent. We may therefore easily understand that it can at the same time be transportable in the form of a germ, and yet not contagious. * * *

At the time I am writing yellow fever has appeared in Mobile and New Orleans a month earlier than it has been known for a number of years, and in the midst of heavy rains which had fallen every day for a month preceding the disease. Vessels have been, for many months, in consequence of the Mexican war, coming in unprecedented numbers from Vera Cruz and other ports where yellow fever was prevailing. Now, although we cannot point to the chain of cause and effect, the circumstances in connection with the strange habits of diseases known to be transmissible, are sufficient to excite suspicion. * * *

Yellow fever, like many other diseases, cannot be propagated in certain localities where the local circumstances are uncongenial to it. * * * As, according to the theory we are discussing, the natural history of yellow fever is closely allied to the natural history of insects, it is proper that I should say a few words more on the latter. * * *

With these few facts before us, how much more easily may we account for the spread of yellow fever from a focus, by the insect, than by the malarial hypothesis—here is something tangible and comprehensible. * * * To one living on the Gulf of Mexico it would look like a waste of time to speak of swarms and migrations of insects. At the very moment I am writing I am annoyed by gnats, bugs, moths, etc., in such numbers that an inhabitant of a northern latitude could not conceive how I can connect two sentences together, and I confess that sometimes they are so troublesome that I am thinking more of my persecutors than the subject before me. * * * I have not attempted to elaborate fully a single point, and my object has been simply to attract attention

to certain phenomena of yellow fever which I think have been too much overlooked, and to lay before the profession, in connection with them, some material which may serve for reflection."

The above extract will show that Dr. Josiah C. Nott was a man of brilliant mind and of close observation, and that he fully anticipated and suggested the mosquito theory of the transmission of yellow fever which was adopted and promulgated by Dr. Charles Finlay, of Havana, thirty years later.

If we consider in conjunction with the suggestions of Nott, a statement made by Dr. Drysdale, of Baltimore, in writing to Dr. Benjamin Rush in 1794, that, during the few months of an epidemic of yellow fever there, mosquitoes had been as numerous as the locusts in the reign of Pharaoh, and that Rush himself observed the same condition in Philadelphia in 1797 and 1805, Dr. Vaughan, of Wilmington, Delaware, in 1802, and many others including Dr. Barton at Clinton, Louisiana, in 1853, all of whom testified to the great abundance of mosquitoes during outbreaks of yellow fever, it will be seen that the time was growing near for a direct accusation against that insect. In two instances it was even noted that in places that had been free from mosquitoes, these insects became a pest during the time of an outbreak.

Dr. Ferguson observed in South Africa, in 1839, that in places where yellow fever was imported, an interval of three or four weeks always elapsed between the time of importation of the first cases and the appearance of secondary cases among the population. This observation was not confirmed until 1899. In 1876 Dr. Greenville Dowell, of Galveston, Texas, asserted that yellow fever could not develop from heat, moisture or filth alone, that there must be some specific cause, and he called attention to the fact that the effects of heat and cold upon yellow fever were the same as the effects of these conditions upon gnats and mosquitoes. After these preliminary suggestions had been made, Dr. Charles Finlay, of Havana, enunciated the mosquito theory in 1881, basing it upon direct transference of the virus by the proboscis of the mosquito. He made a number of attempts to produce the disease by experimental inoculation, but failed in every instance, though a number of persons experimented upon became infected. Dr. Finlay's attempted inoculations were made usually from two to

five days after the mosquito had bitten a patient. In one case only the mosquito was kept six days, and the experiments of the Army Board, as well as those of Dr. Guiteras, and all other investigators who have succeeded in producing cases of experimental yellow fever, show that the mosquito has never proved capable of infecting in a shorter time than twelve days after its contamination. Finlay's cases are explained by the prevalence of an epidemic in Havana at the time of his experiments, and by the fact that his attempted inoculations were made in that city without the proper precautions. The first two experimental cases of yellow fever were produced by Jesse W. Lazear, Acting Assistant Surgeon, U. S. Army, and a member of the Army Yellow Fever Board, at Havana, in the month of August, 1900, and within less than a month he himself had died of the disease. Three months later a new series of experiments was begun, in which ten additional cases of yellow fever were produced experimentally by the bites of infected mosquitoes, and it was shown at the same time that this disease, like malaria, could be communicated by direct inoculation with the blood of a patient. Experiments were also conducted along other lines to determine whether or not the disease was contagious—in other words, if it could be contracted by contact with the clothing, bedding and discharges from patients. These experiments have been narrated so often that it is not necessary to go into detail more than to say that seven non-immune Americans entered and slept in a house especially prepared to resemble the hold of a ship in the tropics, so far as temperature and moisture were concerned, and which was kept darkened and contained large quantities of the most repulsive material directly from the wards of a yellow fever hospital. Soiled sheets, blankets, quilts, pillow cases, etc., were packed in boxes and soaked with urine, feces and black vomit from yellow fever patients. Each of these men slept in that house for twenty consecutive nights, and during that time a box of this offensive material was unpacked by him every evening before retiring. The articles were well handled, shaken, etc., and then hung up on nails about the wall. In the morning, upon rising, the articles were removed from the wall, thoroughly handled and shaken again, and repacked in the boxes, to remain there during the day. Some of these men slept between the same sheets and blankets, and in the same garments in which yellow fever patients

had died. Further than this, some of them slept with their faces in contact with blood recently drawn from a yellow fever patient, which blood, when injected into a non-immune infected him with yellow fever. Notwithstanding such free contact with this material, these men remained in perfect health, and weighed more at the close of the experiment than at the beginning. These experiments occupied a period of two months, and while the men were being subjected to the tests, their temperature and pulse rate were taken and recorded three times daily. After the conclusion of the above experiments, the immunity of four of these men was tested by the application of infected mosquitoes, and by the injection of fresh blood from yellow fever patients, with the result that all four of them contracted the disease within the usual period of incubation. This proved that they were not immune, and the demonstration was now regarded as complete.

I should not let this part of the subject pass without mentioning an experiment which was designed to show that a house infected with yellow fever is simply one that contains infected mosquitoes. For this purpose a special mosquito-proof building was constructed and divided into two compartments by a close wire-screen partition extending from floor to ceiling. Beds and bedding that had been previously sterilized were placed in each compartment, and into one compartment fifteen contaminated mosquitoes were set free. Soon afterward a non-immune entered this compartment, laid down upon the bed and was bitten by several of the mosquitoes. This was repeated later in the day and again on the following morning. On the fourth day after his exposure to the bites of the mosquitoes this man was taken ill with a sharp attack of yellow fever. He, like all the other men experimented upon, had been kept in strict quarantine in an isolated camp well removed from any focus of infection. On the evening of the day that he first entered the compartment and was bitten, two other non-immunes entered the opposite compartment and slept there for thirteen consecutive nights. Their health was not disturbed in the slightest degree, because they were protected from the infected mosquitoes by the wire screen partition between the two compartments. This was intended to show that one could breathe the air of an infected dwelling and it would do no harm, provided one were protected

from mosquitoes, which means, in other words, that although yellow fever is an air-borne disease, the only way in which it can be conveyed is through the bite of an infected mosquito.

The question now suggests itself, do all mosquitoes transmit yellow fever? The answer is, no. For the evidence accumulated tends to show that the power to transmit this disease is confined to insects of a single genus, *Stegomyia*, and perhaps to a single species, *Stegomyia fasciata*. No single successful experiment showing that this power resided in any other mosquito has ever been recorded. From personal observation in Havana I am convinced that the propagation of the disease there is due to insects of this genus alone. I have seen hundreds of *Culex* mosquitoes in the yellow fever wards of Las Animas Hospital at a time when mosquito bars were not used, before the wards were screened, and when yellow fever patients were quite numerous. I have known non-immune nurses to be exposed to the bites of mosquitoes there for months and years without ever contracting the disease. I made diligent search in these wards for *Stegomyia* but always without success. As the *Anopheles* and *Culicina* were present and large numbers of patients were being treated there at that time, it is fair to conclude that the escape of these non-immunes from infection was due to the absence of *Stegomyia* from the wards. This, however, is a matter only of secondary import, because if thorough protective measures are instituted they will protect not only from one mosquito, but from all. The problem, therefore, is a very simple one; we know that the mosquito can never infect with yellow fever until about two weeks or more after she has bitten a patient; if the insect has never bitten a patient suffering with yellow fever then its bite can never convey the disease. The primary and most important consideration therefore is to protect your patients from mosquitoes during the whole attack of fever, and as mosquitoes may become infected by sucking the blood of a patient within a few hours from the onset of fever, it is particularly important to place all patients in mosquito-proof buildings from the earliest onset. The next aim should be to diminish the number of mosquitoes so far as possible and thereby lessen the chances of extension should a case appear. Means should be provided, if possible, for the isolation of patients in a locality or

district where mosquitoes are known not to exist, and all patients suffering from fever should be so protected until all danger of the extension of the disease, if it be yellow fever, has passed. The use of screen doors and windows should be more universal, and every village or town in the yellow fever zone should have a thoroughly screened ward or dwelling to which suspects could be removed. The duty devolves upon all practicing physicians in this section of the country to make known to the people the great capacity for mischief of this beautiful little insect which has become a household pet. The fact that it is a domesticated insect, that it breeds in any clean standing water, no matter how small the quantity, within or about a dwelling, should be emphasized, and it should be made clear that if standing water is frequently changed, if it is oiled or fully protected by wire screens of 18 meshes to the inch, these collections of water will cease to afford breeding places for the mosquito, and the nuisance, as well as the danger, will be greatly lessened. If the average resident is made acquainted with the fact that a few drops of coal oil occasionally in a standing pool, a stagnant ditch, or a rain water gutter will destroy the mosquito larvae breeding there, there will be no difficulty in securing their co-operation to that extent. If it is explained to them that by screening their houses they can, with a reasonable degree of certainty, protect their families from yellow fever, from filariasis and above all from malaria, these considerations alone will induce the majority of intelligent citizens to secure the comfort and protection thus afforded. They should be taught how to fumigate their rooms with pyrethrum powder and rid themselves of flies as well as mosquitoes. It should be explained to them that the female mosquito is a blood-sucking insect, that she needs blood at certain periods in her existence, and that the dangerous mosquitoes bite mostly at night or in the evening; they will then learn to retire to their screened dwellings at sundown, after the manner of Sambon and Lowe, in Italy.

The duty of the physician is to protect the lives and health of the people, and by so doing he will gain their confidence and respect. As a person responsible for the safety of the community, a duty devolves upon him that is easily performed and yet of the utmost importance. He must see that no case of fever shall

escape the usual precautions until it shall be demonstrated beyond the shadow of a doubt that the case could not possibly be one of yellow fever of any degree of mildness. The history of epidemics shows that as a rule the first cases have escaped recognition and the experience of last year tells us that the conditions are not changed. So long as yellow fever continues to prevail in the countries adjoining us, so long will cases of yellow fever continue to be brought into this city, year after year, and while this should be a matter of no concern if the proper precautions are taken, should they be omitted, a disastrous epidemic may at any time result. There is one alternative, viz., to prevent all vessels leaving infected ports or ports within the infected zone from entering the city, to compel them always to anchor one-fourth to one-half a mile from land, to permit no non-immunes to go aboard such vessels and return again without being kept in quarantine for five or six days, and to make it an invariable rule to fumigate such ships against mosquitoes. It goes without saying that our cities can and should be protected against this disease, and if the local physicians will co-operate fully with the health authorities this should be accomplished without difficulty. The matter of international co-operation is one that now deserves consideration, and through this means only can yellow fever be promptly and completely exterminated. One can readily imagine that with an international bureau composed of representatives of the various countries interested, with representation according to the interests involved, the expense being borne in like proportion, and the governments granting authority to act and mutually agreeing to sustain the decisions of the bureau and submit to the temporary inconveniences of the arrangement, yellow fever would soon disappear from our continent. Acting in the spirit of true friendship and with a neighborly regard for the interests of each other, the course suggested seems to be the one that should now be pursued in order to remove a danger that ought no longer to be permitted to exist.

Experiences during the Yellow Fever Epidemic of 1905.

By HENRY DICKSON BRUNS, M. D., New Orleans, La.

As "all experience is an arch where thro' gleams the untravell'd world," and as no faithful account of any portion of a great event by an eyewitness can be wholly useless or uninteresting, I have decided to offer you these notes of my experience during the epidemic of 1905—the more as I was engaged not as a practitioner, but as a volunteer sanitary laborer, but seeing and acting always from the viewpoint of the medical man. You all know how the summer of 1905 wore uneventfully along until the latter part of July, when a sudden "slump" in stocks set all male gossips agog seeking an explanation. You recall how, in casting about to finance the immediately necessary sanitary work, our health officers called together the representatives of the associated banks and made known to them the secret, and how, like all secrets communicated to more than one person, it soon became the common property of the town. On July the 21st the news reached my ears; on Tuesday the 25th it was unobtrusively published in the newspapers. That night I received a note asking me to meet certain neighbors on the evening of the 26th in the basement of Trinity Church. Those invited all lived in the middle portion of the Tenth Ward, and the meeting, it was well understood, was to devise means to place our immediate surroundings in the best possible sanitary condition with the least possible waste of time. The Tenth Ward of New Orleans, you must know, runs from the river to the swamp, and from Felicity to First streets. Meetings of citizens had already been called and volunteer work had already begun in several of the other wards.

Reporting at the designated time and place I found present the Rev. Beverly Warner, the signer of the call; Dr. Joseph Holt, Messrs. Hunt and William Henderson, Mr. Hewes Gurley, Mr. George Leverich, Capt. Robert Perrin, Messrs. Charles and Arthur Palfrey, Capt. I. L. Lyons, Mr. Robert B. Parker, Dr. G. King Logan, Mr. Harry Charles, Mr. George Allain, Dr. Allen Eustis, Dr. L. G. LeBeuf and Mr. Hoffman.

With little ado the meeting was organized by calling me to the chair. Without debate it was decided that the first thing to be done to combat invasion of our neighborhood by the fever was to

make our cisterns impossible to the *stegomyia* as breeding places. To do this, according to the scientific knowledge of the day, it would be necessary to oil them (pour upon the surface of the water a small quantity of coal oil) and next to cover their tops in such a way that no opening larger than one-sixteenth of an inch square should remain unclosed. Secondly, that all premises should be frequently inspected and all standing water poured out, drained away or oiled, and all cesspools and privy vaults cleansed and oiled not less than once a week. Primarily our efforts were to be directed to covering ("screening" was the word universally adopted) as rapidly as might be consistent with thoroughness, our employees endeavoring to extend their usefulness by warning and instructing householders as to the need and the mode of cleansing and keeping their premises so as to make them inhospitable to the mosquito. As a matter of course, money would be at once needed, and the chair was authorized to appoint a finance and other necessary committees. He was also asked to become the organizer and director of the work. I accepted on the express condition that I should have absolutely nothing to do with the raising or handling of the funds. The condition being agreed to, having no faith in the performance of large committees—especially where time is a consideration—I appointed Mr. Hunt Henderson chairman of the Finance Committee, with power to appoint other members if he chose, and Dr. Joseph Holt and Dr. G. King Logan as medical advisers and assistants. Dr. Holt continued to act as adviser whenever called upon until our work ended, and Dr. Logan was our active lieutenant until he was appointed Acting Assistant Surgeon in the Public Health and Marine Hospital Service. It was understood by all that our work would at first be confined to that part of the ward represented by the gentlemen present—a considerable strip lying between Magazine and Baronne streets. We would do all in our power to put it in such order that the health officials might be relieved of all care about it. Afterwards, if time and means allowed, and it should prove agreeable to the residents of a larger area of the ward, we might gradually extend the limit of our endeavor. For at this time it was the common impression that the State and city health authorities were about to begin a campaign of cleaning, draining, oiling and cistern closing along the river front of each ward, progressing steadily toward

the rear or swamp boundary. Evidently, if, upon reaching the middle, or wealthier portion of the wards, they could be found already in satisfactory order, not only great expense and labor, but—what then was even more precious—time, would be saved. It is needless to say that no adequate idea prevailed of the magnitude or cost of such a task; nor of the extent of the infection and the difficulties of sanitation in the original infected district; conditions which at once began to absorb all the efforts and resources of the State and City Health Boards, rendering it impossible for them to throw any force worth speaking of into parts of the city as yet slightly or totally uninvaded. It was this inadequacy of means to the end which brought about the appeal to the United States for assistance and the supplanting of the local sanitary authorities by the national—the United States Public Health and Marine Hospital Service. Yet, looking back, there is reason to believe that had our Health Boards pursued a course similar to the national organization's, had they appealed at once to the community for a third of a million as sinews of war, had they put every ward in the city in charge of a medical man of sense and character and established a detention hospital, or hospitals, under men of experience, they might have done as well. That the money was forthcoming the event showed; that the men were available was proven by the taking into its service of some two score of our younger physicians by the Public Health and Marine Hospital Service, and the numerous capable volunteer and paid workers who were immediately developed by the citizens' aid associations.

But to return from this digression: Dr. Beverly Warner very kindly placed the basement of his church (Trinity), together with its large yard, at our service as a headquarters. The offer was gratefully accepted, and the meeting adjourned. It may be stated at once that the resolution to keep distinct the financial and executive departments of our work was rigidly adhered to. All contributions to the fund were made to and acknowledged by the chairman of the Finance Committee, or in his absence by Capt. I. L. Lyons. The final statement prepared by him shows that the total amount collected was \$1,486, of which an unexpended balance of \$234 was, by mutual agreement, turned over to the Rev. Beverly Warner, superintendent of volunteer ward organizations, and was by him covered into the general fund raised by the

citizens in fulfillment of their promise to the United States Public Health and Marine Hospital Service; so that our work cost us almost \$33 for each of the thirty-eight blocks worked over. Save in emergencies, nearly all supplies were bought through a purchasing agent, a position which Mr. Hewes Gurley kindly volunteered to fill. The approved bills were paid by our treasurer. He also paid the weekly clerical and labor payrolls prepared by our office force, so that every bill passed through at least two hands and no question as to the misapplication of a cent could possibly arise. The final statement already referred to contains many interesting data as to the amount of material consumed in protecting the thirty-eight rather thinly-built-up blocks in the area of work. For instance, we used no less than 290 pounds of bill posters' tacks, 41 hammers, 23 pairs of shears, 58 balls of twine, 3 dozen sacking needles, 6 gross of large safety pins, and 17 extension ladders, besides many one and two gallon oil cans, several large and small tin funnels, barrel faucets, scratch pads, and bill files. All these not consumed in service we turned over to the Public Health and Marine Hospital Service officer in charge of the ward on the completion of our work. Seven barrels of oil were given us by the General Citizens' Committee; of which we used four and turned over three to the Public Health and Marine Hospital Service Acting Assistant Surgeon. Unfortunately no exact idea of the amount of cloth consumed can be arrived at, because a large quantity of cotton cloth of excellent quality was given us by the Maginnis Cotton Mills, and because, until we had finished "screening" and were engaged only in inspecting and repairing, all other cloth was purchased and presented to us by Mr. Robert Parker. That, during the work of inspection and repair alone, we found it necessary to use no less than 1,034 2-3 yards at a cost of \$38.82 faintly indicates the great quantity consumed. Another donation, six barrels of creosote, given us by Mr. Sylvester Labrot, was experimented with in treating gutters, both stagnant and flowing. It was found very useful, for its specific gravity being high it sinks and continues for a long time to produce an oily film upon the surface of the water. On this account, and by reason of its antiseptic and deodorizing properties also, a half and half mixture with coal oil was found to be the best material for treating privy-vaults (Dr. Samuel Logan, Acting Assisting Surgeon, Pub-

lic Health and Marine Hospital Service) and exposed pools, from the surface of which coal oil scum quickly evaporates.

Our first day, July 27, was mainly occupied in finding proper foremen, but work was begun. From the start we determined to send out no workmen except under trustworthy and intelligent foremen, and we were fortunate in obtaining them. A few were secured on July 27 and the others in the next day or two. They were: L. Mitchell, E. F. Salerno, C. P. May and R. C. Finlay, under-graduates of Tulane Medical Department; C. J. Chapotin, C. Kubel, A. M. Warner, George Upton and the Rev. George Summey, editor of the Southwestern Presbyterian, a volunteer. The course of Dr. Summey cannot be too highly praised. Quietly, without in any way seeking notoriety, he abandoned his professional and editorial labors and devoted his whole time to working as an oiling and screening foreman. The wisdom of securing entirely competent foremen before putting any laborers in the field became more and more apparent as we went on. Not only were the men kept steadily at work and all question of "soldiering" eliminated, but great loss of time in getting to work in the morning, in keeping well provided with material and in deciding promptly upon the correct solution of many difficult, little mechanical problems of thorough cistern covering, which frequently arose, were prevented. These foremen rapidly got together a highly efficient body of workmen, as they were given full power to employ and discharge, and the lazy or incompetent were soon weeded out. Indeed, failure to secure the right kind of foremen and to grant them these powers, together with the intrusion of political influences which insisted upon the employment of dwellers in a ward upon work in that ward, regardless of fitness or sobriety, often forcing the retention of men, drunken, inept or incompetent, seemed the chief source of wasteful expenditure and inefficient work which I observed in some parts of the city. Our foremen and clerks (except the volunteers) received two dollars a day, and our laborers one dollar and fifty cents. The largest number of laborers employed was seventy-five, and the smallest six. Our highest weekly payroll was \$502.15, and the lowest \$66.75. The opportunity to earn this money at the height of the dull summer season and during a time of epidemic was a godsend to a large number of men, some middle-aged with dependent families, but the largest

number young and single. The quality of labor we were able to engage was quite extraordinary, consisting of clerks and minor railroad employees of every kind, factory hands, mechanics, etc.—all men of intelligence and energy. Many were young fellows who had come here during the prosperous winter, obtained work, been discharged when quarantine confined the business of the city, and who were thus enabled not only to support themselves, but to lay aside enough to pay for transportation to other, and for the time more favorable, fields of employment. The same was true, of course, throughout the city, and the money put into circulation in the execution of sanitary work and for material was instrumental in converting what must otherwise have been a season of poverty and privation to the masses into one of comparative prosperity and comfort. What a contrast to the old days, when under a visitation of the yellow plague there was nothing to be done but to sit still, to suffer and to die! How often is wisdom not only justified of her children, but of her collateral descendants!

We began work knowing that wire gauze was unobtainable in the city and that our screening must be done with cloth. We made use of three qualities, being always glad to use what we could get, and generally being unable to choose what we would take. One was a good cheesecloth heavy enough to be used in single thickness; another, a much more sleazy material, requiring to be doubled to be of sufficient strength, and the third, the material given by the Maginnis Mills, good heavy coarse sheeting and good light duck. This we found far and away the best, and our experience led us to believe it more suited even to permanent work than wire gauze because, being more pliable, it can be more exactly applied to the closing of minute cracks by the average workman, and, if well painted over, it must prove more durable, for every variety, save the very expensive true bronze-wire gauze, rapidly corrodes.

Our first day's experience showed that, besides the obviously necessary barrels of coal oil and the extension ladders, five and two gallon oil cans, tin funnels, barrel spigots, hammers and tacks, shears, sacking needles and twine, and large safety pins were needed for cutting and fastening the cloth. Our men tried, but quickly rejected one after the other, all the suggested oiling devices, from bottles tied to poles to tin cans which opened when pressed upon the cistern rim. Some of these were found difficult

and time-consuming to fill, others could not be introduced behind the overhanging eaves of certain types of cisterns, while still others were more likely to shower their contents upon the heads of the users than within the cisterns to be oiled. They were all superseded by a ladder and a common pint or quart beer or wine bottle. These could be handily carried by a string tied around the neck, rapidly filled by means of a funnel, and easily poked into and emptied through any opening in a covered cistern. After the first day there arose a loud demand from the workmen for carpenters' aprons to hold their tacks and small tools while working on the ladders, and for tacks with heads guarded by pasteboard, as they held the cloth better and could be more rapidly used. To supply these needs we asked the assistance of the ladies of the neighborhood, and in a day or two they furnished us with more than two dozen carpenters' aprons of cheap ticking and no end of pasteboard cut into squares of about one inch. The whole leisure time of our office force and of all our visitors was spent in pushing tacks through these pasteboard squares, but during the height of the work the demand exceeded this supply, and we were obliged to engage two small boys at a quarter of a dollar a day. The speed developed by these little professionals, their rivalry, and their devices for facilitating their work afforded us all much amusement.

Early experience showed the best working unit to be a foreman and two laborers for an oiling gang, and three laborers for a screening gang. In the oiling gang this allowed two laborers to carry the extension ladder, their bottles, and a two-gallon oil can each, while the foreman usually carried an extra oil can. In the screening gang, two laborers, if the cistern were large, worked on the ladders, while the third and foreman, who directed the work, assisted in moving the ladders, handing up the material, helping to drape the cloth, etc. If the cistern were small two of the laborers worked at one and the foreman and the remaining man at another. Toward the beginning of the second week many of our foremen were able to work two or even three gangs of three men each upon the cisterns of contiguous properties; but the reiterated instructions to all were thoroughness and diligence, but no more speed than was compatible with efficient work. The route from premise to premise was usually by means of their ladders over back fences. Thus unoccupied premises were reached as rapidly as occupied

ones, and the front streets, as a rule, presented no evidence of the presence of the workers. Occasionally a ladder or a big oil can standing by a front fence, a wagon, cloth and ladder laden, its sleepy driver lolled upon the seat, its hang-dog-looking mule somnambulistically stamping flies beneath the torrid sun, would serve to guide the executive who wished to drop in unawares to see how his men were getting on. Two wagons were used during the whole of our work, save for the last few days of reinspection. One was furnished by Mr. Robert Parker, the driver being paid by us; the other, together with its driver, was supplied by the Messrs. Henderson. During the first days they hauled the oil barrels and deposited them in the yards of obliging citizens at convenient points throughout the district; they carried fresh supplies to the oiling gangs as the contents of their cans were used up; and, on mornings when oiling was to be begun at a distance from headquarters, they carried the men, their ladders and their oil to the starting point. After the first five days, when oiling had been completed and the oil barrels had been hauled back to headquarters, they hauled the ladders and material to the starting points every morning, and were fairly busy all day hauling extra material or transporting gangs, which had completed one block, to a new one. When not employed they reported to headquarters and remained in its immediate vicinity ready to be dispatched on any errand.

Our office force, composed of Dr. G. King Logan, Captain Robert Perrin (volunteer), Mr. C. C. Waterman, Mr. George Leverich and Dr. J. D. Weis (volunteer), soon had everything systematized and working with machine-like smoothness. Our day's work began at 7 a. m., and at that hour of each summer's morning I found one or two members of the office force, the foreman and their gangs, and the two wagons assembled before the basement of Trinity Church. The doors were unlocked, the big gates of the yard swung open, and a scene of orderly haste and bustle began. The gangs loaded their ladders and the day's supplies of cloth upon the wagons, and then each foreman received from one of the office men, stationed at a window opening on the yard, oil cans, funnels and a box containing tacks, carpenters' aprons, hammers, shears and all things needed by his gang for the day. These boxes were also placed in the wagons and away they went to the parts of the district wherein work was to be pushed during the day. At 6

p. m. the wagons loaded with the boxes and ladders returned. The two ladders belonging to each gang, tied together and properly numbered, were stored in the yard. Oil cans and work boxes were passed by the foremen through the window to a member of the office force, who looked to see that all tools taken out were returned. Each foreman handed his day's report to another member of the office force, who had charge of that particular, and the day's work was at an end.

Owing to the varying density with which the squares in the territory were built up and the great differences in size of cisterns encountered, to avoid also any stimulus to hasty work by the excitement of rivalry between our foremen, no effort was made to keep account of the number of vaults and cisterns oiled and screened daily. Instead, a large diagrammatic map of the thirty-eight squares, showing their city numbers and the streets bounding them, was prepared and posted upon one wall of our headquarters. As the oiling was completed on a square a blue circle containing the date was drawn upon the square indicated on the map; when the screening of a square was finished a red cross holding within its arms the date was drawn. Every morning a general order directing each foreman to the square that he and his gang would be employed upon during the day was hung upon a bill-file near the map. If a square had been so far completed during one day it was sure to be finished the next, then the general order would indicate the square to which the gang should next proceed. In this way a glance at the map told not only how the work was proceeding and how long a time had elapsed since a particular square had been oiled or screened, but just where every foreman and his gang might be found at any particular time if need arose to communicate with him, send additional supplies, etc., as very often happened. Extra material needed through the day was issued upon a written requisition upon headquarters by a foreman. The material was issued by a member of the office force, one of whom was always present, and the requisition hung on a bill-file kept for that purpose and properly labeled. Foremen were supplied with small scratch pads. On the first leaf, under the date of each day, they copied from the general order their assignment, and on the following leaves kept account, by street and number, of the premises visited, and the number of vaults and cisterns oiled and screened at each. They

also jotted down the presence of any nuisance on any premise and anything else noteworthy. The last leaf bore the names of the gang employed under that foreman during the day and was signed by him. From these reports the daily labor roll could be made out without fear of mistake or contradiction. All reports of nuisances, improperly wire-screened cisterns, old wells which should be filled, pools or butts of standing water, were hung upon a file. Every night these were taken up by a special volunteer aid (Dr. Joseph D. Weis), who devoted himself to this task, writing and mailing a courteous note to the property holder asking for a rectification of the condition. The number of concealed cisterns (many in small back rooms), of old unused wells (some under but slightly raised buildings), or partly buried water-butts, shallow ponds, etc., discovered in the comparatively small area under our care, was astonishing. A wall-file was also kept for the posting of complaints of property holders, and these you may be sure were numerous and varied. Many seemed unable to realize that damage to a piece of rotten gutter pipe was far more than compensated by the value of the cistern screening being done for them at public expense. However, each complaint was taken up and attended to, and in the end, we believe, to everyone satisfactorily. It will be seen that hanging bill-files played a large part in systematizing our work. It was found the least troublesome way of keeping all kinds of memoranda and accounts in a business of emergency like this. Indeed, the walls of our headquarters were covered with rows of files, each surmounted by a label indicating its purpose. Only two books were kept, one, the property book, an inventory of our tools and stores entered as they were purchased; the other, the alphabetical payroll made up from the daily reports of the foremen for the laborers and for the office force by our chief clerk. An important file, called the "Skip Book," hung from a nail in the wall. It contained a list of particularly difficult jobs of cistern covering. For it came to pass that, during the first rush of the screening gangs over the district, certain cisterns were left unscreened, either because they were overlooked, or were hidden away in houses or sheds, when they were usually reported to us by tenants, or because they were of such size, height or other difficult nature as to be beyond the skill of the first gang which encountered them.

Those unfamiliar with New Orleans must know that the main

drinking-water supply is from rain collected from the roofs in wooden containers like railroad tanks, and almost always fitted with covers. Many of these receptacles are arranged one above the other in two or even three tiers or stories, so that the top of the highest may be level with or even a little above the house roof. They are to be seen of every diameter and height. The covers may be of plank, in which case they are often old and rotten, or constructed of sheet iron over wooden frames, conical, dome or minaret shaped, and these often present seam-cracks or rust-holes. Many very wide cisterns, twelve to fifteen feet in diameter, without covers of any sort, were met with. The "skips" were for the most part of this character, and a gang of specially experienced handy-men under a foreman of exceptional intelligence and aptitude was constantly engaged in dealing with them. In this Messrs. Summey and Horton rendered valuable service. In covering large cisterns with very rotten tops, or none at all, a ladder had to be passed across the top from one point on the rim to another, and a rude frame of boards or scantling constructed. A large sheet made by sewing breadths of cloth together, the seams being carefully wrapped in and stitched with twine, was then drawn over the frame and tacked down all around. In screening to cover cracks and holes in sheet-iron domes, similar sheets had to be made and wrapped about these cupolas. Sometimes poncha-like discs with a central hole were slipped over the spike, which, like that on a German helmet, often adorns these metallic domes, and were fastened down everywhere to the side of the cistern. In the case of a large cistern encased in cement, into which tacks could not be driven, the cloth cover was allowed to depend far down and then drawn close to the cistern circumference with cord passed around and around it. Many of the ways in which the cloth was fitted close around awkward inlet and outlet pipes did credit to the American reputation for ingenuity. Indeed, these inlet and outlet pipes were a subject of much concern to all engaged in cistern covering. At first we enclosed outlet pipes satisfactorily by putting a square of cloth over the lower end, gathering the edges close about the pipe and securing them in this position by wrapping around and around with twine. But sometimes trash accumulated at the lower end of the pipe, behind the cloth, and caused stoppage. Later a better plan, suggested by one of the Marine Hospital surgeons, of fastening with cord to the lower end

of the pipe a sleeve of cotton cloth about eighteen inches long, was adopted. When the cistern overflowed water passed freely through the sleeve at the end of the pipe; when the flow ceased the cloth collapsed and prevented the ingress of mosquitoes. Inlet pipes coming from the roof gutters we at first closed by plugging the opening from the gutter into the pipe with a cone made of wire gauze painted to prevent rusting. The cone, about six inches across the top, could be pushed tightly into the opening of various-sized pipes, effectually sealing them against the entrance of anything more than one-sixteenth of an inch in diameter. They could be quickly made by rolling up a square of wire gauze, as a cornucopia is made from a sheet of paper, and fastened by a few turns of wire raveled from the edge of the gauze. A handy workman was kept making them, and we used up many dozen; sixty-six feet of yard-wide gauze being consumed before we abandoned this method. The cones were given up partly on account of the impossibility of getting fine gauze and partly because householders objected to them, on the ground that trash washed down the roof gutter would dam against the cone edges and cause the roof gutter to overflow. I confess, however, that it seemed to me better that this should occasionally happen than that the trash should find entrance into my cistern, as the cone could easily be pulled out and the gutter cleaned whenever necessary. We substituted the same sleeves that were tied over the ends of outlet pipes. Where the cistern end of the inlet pipe could be readily got at, the sleeve was tied over its open end just as with the outlet pipes. Where the cistern end of the inlet pipe was within the cistern cover and not get-at-able, the sleeve was passed into the inlet pipe at its origin from the roof gutter; then a straight bit of elastic steel about a foot long, and one-sixteenth inch thick, and a half of an inch wide, was curled into a circle and passed just within the mouth of the sleeve. When released it expanded to the circumference of the pipe and held the mouth of the sleeve closely applied to the pipe's inner surface. For these sleeves we were also indebted to the ladies of our neighborhood, who had several hundred made for us at a cost of five dollars.

Our main task was completed at about the time that the Health and Marine Hospital Service office, under Acting Assistant Surgeon Samuel Logan, was established in the ward. For the

sake of greater ease of coöperation, our headquarters were, therefore, now moved over to the commodious building occupied as headquarters by Dr. Logan. Our force, which had been gradually reduced as the work drew to completion, was cut down to two gangs of a foreman and three men each. These were, naturally, selected from among the most conscientious, experienced and ingenious of all who had been in our employ. On August 9 they began a systematic, minute inspection of all screening work. Their orders were to recoil any cistern found defective and to leave all mosquito-tight behind them. One wagon was retained to carry the ladders, cloth and other material to and from work. Following instructions, the foremen themselves mounted the ladders and inspected every foot of screening at close range, examining especially the cistern tops and the inlet and the outlet pipes. If any defect was found the cistern was oiled, the men were instructed how to make it mosquito-tight, and exact completion of these repairs carefully overseen. At the same time an additional lookout for standing water, hidden wells, or other nuisances, was kept, and all such were noted in the foreman's daily report. These reports were at once turned in to Acting Assistant Surgeon Logan, who instituted instant and energetic measures for the treatment and abolition of these nuisances. Although we thought our screening had been exceptionally well done, and always under repeated instructions to prefer thoroughness to speed, yet so many were the damages inflicted by wind and weather, and so numerous the other small defects and omissions discovered on critical review, that it took twenty days to go over the territory (thirty-eight blocks) and make all perfect. The wire screening at this time being put on by private contractors to replace our cloth proved especially defective and vexatious. Those engaged in wire screening seemed, for the most part, to have failed to grasp its purpose and to be unable to realize that a gap of over one-sixteenth of an inch makes a whole job useless. They seemed to think that anything which would exclude an English sparrow would answer the purpose.

As soon as this first inspection was finished (August 29th) re-inspection was begun. Those blocks which had first been given to one inspector were now assigned to the other and *vice versa*. By September 7, this second inspection being virtually completed, and the acting assistant surgeon of the Public Health and Marine Hospital

Service having the whole sanitary work of the ward well in hand, I could see no reason for the maintenance of an extra cog to the machinery. I therefore closed our office. The ladders and other implements on hand were, after consultation with those interested, turned over to the Public Health and Marine Hospital Service officer; our accounts were balanced by Captain I. L. Lyons, our acting chairman of the Finance Committee, the cash surplus donated through Dr. Warner to the Citizens Auxiliary Committee, and our work was done.

It is pleasant in looking back to be able to believe that we accomplished what we set out to do: To make a belt across this large and populous ward so thoroughly oiled and screened as to be mosquito-proof, and thus to save to the central authorities care, expense and, above all, time. The area, six by six blocks, was sufficiently large to form an interesting experiment. So far as I know it was the only district in which volunteer sanitary work was carried on from beginning to end under the constant personal supervision of a medical man. By all testimony the stegomyia, though not as extinct as the dodo, became in the centre of this tract a curiosity. Around some of its edges, where our neighbors were not so well protected until the Public Health and Marine Hospital Service took hold of the work, I am told that many could be found. The area became infected seventeen times; the first time in the last days of July, but so far as we know the infection never spread but in a single instance—in the square at the corner of Camp and Felicity streets. Ten times out of the seventeen the infection occurred on the boundaries of the area. It occurred six times on the Camp street and three times on the Baronne street boundary; never on the First street boundary.

One may be sure that the experience of our men was checkered with incidents both pleasant and unpleasant during their forty-five days' campaign. Though for the most part the people acquiesced very good-naturedly in what was being done for the common weal, the belief in the mosquito theory was by no means universal. One hard-headed old Irishwoman obdurately refused to allow her cistern to be oiled. When finally persuaded by one of the most diplomatic of our foremen she exclaimed: "Well, come in and do it, if yez is bound to, but I don't believe yez can keep

the Lord from gittin' those He wants by puttin' a little ile on the cisthorns." The most unpleasant incident had to do with ward politics. After we had been at work about a day and a half the political leader of the ward called a meeting to "organize the ward." This meeting was attended by nearly all, if not all, the gentlemen who had been present at the Trinity Church meeting and others from the central division. The meeting was organized by the ward leader, and all motions carried and all nominations confirmed were made or suggested by him. The ward was divided into three sections. The middle one, extending from Camp to Baronne street, was confided to our care. It was resolved that the chairman of the meeting and the executives of the three divisions should meet and appoint a Finance Committee to have charge of collections and disbursements for the whole ward. The gentlemen from the central division, at whose instance I had begun the work, were without confidence in sanitary work conducted under political auspices. I was unwilling to direct such work in coöperation with a Finance Committee for whose appointment I should share responsibility, but in whose selection I should, at best, have but one vote out of three. We therefore left the meeting and determined to continue our work independently. Afterwards a rumor was circulated that the wealthier inhabitants of the central division selfishly subscribed money to protect themselves alone and left their poorer neighbors of the front and rear to meet the cost of sanitary work as best they could. This is untrue. I know that more than a score of the well-to-do living in the middle division contributed to the oiling and screening in all three divisions; many most generously to the ward funds and to the general fund besides. That more whom I do not know did so is highly probable.

The slow progress of our first inspection, which took twenty days, was the subject of some disagreeable criticism. I mention it here to emphasize the difficulty and the time-consuming nature of this work when thoroughly done. It was said that our men were not doing their duty, but were dawdling over their work for the purpose of drawing pay for a longer time. The accusation was ridiculous. First, the two foremen in charge of inspection and repair were selected from the large number who had been in our employ by reason of their trustworthiness, diligence and skill. Their characters to those who know them are refutation enough. Sec-

ondly, their work was not done in secret, but under the eyes of the many Public Health and Marine Hospital Service men who were constantly about the premises where they were employed, of the citizens in whose yards they worked and under my own, for I frequently dropped in upon them at unexpected times. Thirdly, a like opinion has never been heard from any who closely followed this kind of work. On the contrary, that two gangs of four each could have thoroughly covered thirty-eight blocks in twenty days has seemed to them evidence of remarkable industry. A reliable man of experience stated that he had found in one block in another district twenty-six cisterns, supposed to be properly screened, which were lamentably defective and which would have required many days to repair effectually. Such criticism shows ignorance of the practical difficulties to be overcome in so closing the various types of cisterns in any district of New Orleans as to make them absolutely mosquito-tight.

SUGGESTIONS.

The experience of our summer's work resulted in the following reflections:

That the attempt to screen during an epidemic is most unfortunate. During such a time of stress the work is hurriedly and imperfectly done and cisterns which are really open to the mosquito are supposed to be properly closed. Too much attention is concentrated upon this work and the search for other standing water is neglected. These and the cesspools remain unemptied or unoiled and constitute a source of great danger. It would be far better during the actual prevalence of the disease to concentrate all attention and all work upon keeping every cistern properly oiled and reoiled, upon seeking out and emptying or oiling every body of standing water, and upon the thorough fumigation and refumigation of dwellings.

The thorough screening of cisterns so as to leave no opening larger than one-sixteenth of an inch can only be done by skilled workmen. A very common fault in this work is the neglect to carry the wire gauze or other screening material a foot or two down the sides of the cistern. The staves of many cisterns do not come close together at the top, and, especially in dry spells,

there are large cracks between the staves, extending down a foot or more from the top through which any mosquito can readily pass.

Inspection and reinspection of the screening are as important as the work itself, and must be thoroughly, intelligently and conscientiously done to be of value. In practice it was found impossible to do this work with less than two workmen to move about the long extension ladders and a foreman of greater sagacity and fidelity to observe, note and direct the necessary repairs. Inspection done from the ground, done in any way than by going over the whole work minutely from a ladder-top, is worse than useless, in that it establishes a false belief in safety where no safety exists. The work too, if well done, is tediously slow, and many gangs will be required to inspect a whole city within any reasonable time. Unless our health authorities are particularly careful and fortunate in the selection of their employees for this work, the foundation of a calamity will be laid. It is certain that the *average* city employee possesses neither the intelligence nor the fidelity to be a foreman of such work. Reinspection is necessary because most of the material commonly used is very perishable. Only the best quality of bronze wire effectively resists the constant action of air and water. It is a pity that the screening ordinance does not permit the use of a good quality of duck. Our experience led us to the conviction that this material can be more closely and effectively applied by the ordinary workman than wire gauze, and when oil painted it certainly lasts longer. The objection that it prevents adequate aeration of the water is without force. It is practically impossible to close hermetically a wooden cistern. Rain water is charged to saturation as it falls; coolness and darkness are unfavorable to vegetable and therefore to animal life, and make for purity of the contained water. As it is impossible to know how long defects may have existed before they are found, all cisterns with gaps more than one-sixteenth of an inch should be at once recoiled by the inspectors.

There can be but little doubt that the *stegomyia*, whatever may be her habits now, will, if driven to it, take to depositing her eggs in gutter water and that the larvae will learn to endure their new environment. Hence it is of the greatest importance not only

that underground drainage and sewerage should be pushed to completion as rapidly as possible, but that paving with asphalt, upon which unbroken surfaces must be maintained, should go hand in hand with this work. The asphalt pavement, sloping gradually to the curb, leaves no deep gutter in which stagnant pools can be maintained. Wherever the work has been done in such fashion as to leave these it should be remodeled without delay, and where the necessities of heavy hauling demand material other than asphalt it should be so laid as to abolish forever the old-fashioned deep gutter. A comparison of the gutters on Gravier street from Camp street to Baronne with those on Howard avenue from St. Charles to Baronne; of those on Poydras street from Camp to Baronne with those on Girod between the same streets, and of those on St. Charles street between Julia and Girod with those on Carondelet between the same streets, will give a striking illustration of the importance of this work and the need for prompt remodeling.

In some cities the tenant is required by law to sweep or cause to be swept down every morning the stretch of gutter before his house. The ordinance is easily enforced by a word from the policeman on the beat to the householder or his servant, and all are easily educated to the advantages of the plan. It appears that such an ordinance would be specially useful in this city.

An experience with even a very limited area showed that this old city is peculiarly rich in hidden wells, cisterns and other containers. I beg to suggest that an important part of the work of our health officers in preparing for the coming summer should consist in obtaining as complete a knowledge of the location of these containers as possible. This could be done by urging all citizens possessing such knowledge to communicate it at once to the health authorities either directly or through the public press. We found last summer that many tenants were unaware of the presence of such sources of danger on their premises, and we often obtained knowledge of them in an indirect way from former tenants or builders of the houses. The search for all unscreened bodies of standing water on all premises cannot be pushed with too great a vigor if we are to exterminate the stegomyia.

May I be permitted to say that perhaps the health authorities

might enlist the services of the physicians of the city as volunteer inspectors of premises, alleys, etc.? The general practitioner on his rounds penetrates into every quarter and into almost every dwelling of the city. In furtherance of the general good these gentlemen might be persuaded to note down and report to the health officer every threatening nuisance which comes under their eyes without any uncomfortable use being made of their names.

It seems to me also that it has become eminently a part of our duty to encourage by word and example the sentiment that, its mode of propagation being well understood, yellow fever has been robbed of its terrors and is no more to be regarded with panic-terror by intelligent people than an outbreak of smallpox or diphtheria. As we in smallpox, by the vaccination of all non-immunes, and in diphtheria by the bold use of the serum, both as a prophylactic and a cure, proceed at once to stamp out what were in times past two of the most mortal plagues, so now upon the appearance of yellow fever we can by the prompt report of all suspicious cases, and their proper protection either at home or in detention hospitals, by the thorough fumigation of infected dwellings, and by reducing to the least possible number all breeding places of the *stegomyia*, cut down to a minimum the mortality, and therefore the dread, of this one-time scourge. This must follow as the logical result of our newly acquired knowledge; and when it is coupled with a calm appreciation of the utter lack of protection afforded by even the most rigid quarantine, so glaringly illustrated by the epidemic of last summer in this State, yellow fever will take its place in the popular mind alongside of smallpox, diphtheria and rabies—as a disease to be avoided, but no longer capable of striking whole communities with senseless fear, canceling their humanity and exalting above every manly sentiment the brutish instinct of self-preservation.

Perhaps it is Utopian as yet even to hope, but the day must come when, if we are to be protected in our health and lives by sanitary officials, these, more than any of our public officers, will be chosen by the application of the strictest of civil service laws. We can imagine, if we cannot hope for, boards of health composed of a chief sanitary officer and two or three assistants; subordinate to them a body of inspectors, and clerks of

vital statistics, each receiving a salary sufficient to compensate him for devoting his life to this important work. Admission to the lowest grade of this profession—say a clerkship of vital statistics—would be open to young medical men of good character. Upon a vacancy occurring in the next highest grade—let us say that of inspector—a successful competitive reëxamination would promote the brightest of the clerks; and so on to assistant to the chief sanitary officer, and finally to that of chief, when that official should be retired after a long, but fixed, period of service. To some such method the inevitable processes of evolution must lead at last.

But, come what may, through the long years that we are developing wisdom enough to choose the protectors of our lives and of lives dearer to us than our own by some better test, some higher qualification, than that of political subservience, we should at least be too proudly manful to fear and falter beneath afflictions that follow, as the night the day, the folly of our own acts.

March 1, 1906.

NOTE.—May 1. I am persuaded of the truth of the dictum that mosquitoes in a house mean the presence of standing water—if it be but a small can—near the dwelling. In the center of the area, which we screened so carefully last summer, mosquitoes are now still conspicuous by their absence. It seems to me that if householders were to report the presence of mosquitoes in especially great numbers, a useful purpose would be served. A particularly vigorous inspection of such a neighborhood would probably disclose a defectively closed cistern, or some other eradicable hatching pool. I am told that mosquitoes are even now unusually bad in the neighborhood of Audubon Park, and I believe that an inquiry into the condition of the many bodies of standing water in the park would not be without use and interest.

DISCUSSION.

DR. KOHNKE: If Dr. Bruns had discussed the subject with a view to the preparation of a paper the result would have been substantially what has just been read, except for this amendment:—That where the doctor says the average city employee is not of sufficient intelligence to perform the function of carrying on this

work, I would have said the average employee who gets the same pay. The work demands a higher order of ability than is paid for. It is a very important work, and we can not employ men who are sufficiently qualified simply because there is not money enough to pay that kind of men. No man will do work except for compensation, save under the influence of a prolonged enthusiasm, which lasts for only a short period; but for prolonged service, such as is required in departments of government, there must be a compensation commensurate with the earning capacity in other fields of the man employ. I might add that the doctor's suggestion that the members of the medical profession might assist us in the work is already in actual operation. A number of physicians in this city have already given information of the kind referred to, and this information has been and is being acted upon.

Orleans Parish Medical Society Proceedings.

President, DR. C. JEFF. MILLER.

Secretary, DR. AMEDEE GRANGER

141 Elk Place, New Orleans.

In Charge of the Publication Committee, DR. AMEDEE GRANGER, Chairman
DRS. GEO. S. BEL and E. H. WALET.

MEETING OF JULY 28, 1906.

DR. C. J. MILLER read a paper entitled

Vaginal Section, Some Indications, Limitations and Technic In Pelvic Suppuration.

The presentation of a paper on the vaginal route in pelvic surgery never fails to provoke an animated discussion. No other procedure in gynecology has been so loyally championed by its followers, or so warmly criticized, and as a result its real merits are not appreciated, or at least, not always well defined. It has been justly condemned by some because those who favored the

operation claimed too much for it and recommended it as a routine method in every affection of the pelvic structures. Routine methods in surgical technic are as dangerous and unscientific as the physician who prescribes by routine, and it is possible that the champions of the vaginal route who have been over enthusiastic in their claims have done as much to deter the beginner from giving it a fair consideration as the abdominal surgeon who condemns without qualification.

I do not wish to convey the impression that I am an enthusiast regarding vaginal section, but simply one who has recognized in the course of considerable pelvic work that it is oftener indicated than performed, that it is often the only life saving measure at hand, and that everything being equal, any operation that can be done as well and safely through the vagina as through the abdomen is entitled to fair consideration.

The indications and limitations so carefully described by various surgeons are only relative after all. The scope of any procedure necessarily widens according to the experience of the operator, and what may be the limit of safety in one surgeon's judgment, will to another who is more skilled prove a nominal difficulty.

Every known operation on the uterus and appendanges has been performed through the vagina with satisfactory results, but this is not sufficient proof on which to condemn the abdominal technic and insist that the lower route is generally to be preferred.

The vaginal route is for a large proportion of cases impracticable. The enthusiast can never persuade a skilled abdominal surgeon to adopt the lower technic in cases of senile atrophy of the vagina, or, in the long, narrow, virgin vagina, or cases of large hypertrophied uteri, with thick contracted broad ligaments and appendages diseased and adhered beyond the reach of the finger. In such cases abdominal section is much safer, in fact the diseased structures are inaccessible by the vaginal route unless hysterectomy is deliberately performed from the beginning. This, of course, precludes the possibility of conservative work and stands as a serious objection.

The one indication for vaginal section upon which all surgeons agree is its application in acute cases in which a large abscess is situated close to the vaginal tract. The indications are equally

clear in chronic suppuration when the condition of the patient is so grave as to prohibit radical operations. Incision and drainage which can be accomplished in a few minutes may be only a temporizing measure, but it allows time to improve the general condition of the patient, and is really a life saving measure in many instances. Dudley concludes the chapter on incision and drainage in his late book by saying that: "The mortality of opening the peritoneal cavity by either route in acute suppuration before pus has had time to become sterile is excessive. The withdrawal of such cases from laboratory statistics and the relegation of them to the statistics of vaginal incision and drainage would reduce enormously the mortality of abdominal surgery." Noble, of Philadelphia, has stated that his mortality from vaginal incision of such cases was two per cent, as contrasted with 25 per cent or more by abdominal section.

Whether the pus is situated in the Fallopian tubes, the ovaries, or, as is frequently met in puerperal infections, in the cellular tissue, if the patient is in a critical condition there is no question as to the merits of vaginal drainage. When properly performed it involves less shock and is therefore suited to cases of extensive pelvic infiltration and adhesions for which the abdominal route is extra hazardous.

All well defined, large abscesses, surrounded by a small amount of inflammatory exudate usually yield readily to free drainage, and when attacked from below there is less danger of contaminating the abdominal viscera, recovery is less complicated and more rapid, and, most important of all, better drainage is secured.

There are other factors which should always guide the surgeon in selecting the method of procedure, chief among which is the nature of the infection and whether the condition is acute or chronic. There is a large percentage of chronic cases that can be practically classed as non-septic. In 1904 Andrews, of Chicago, published the results of bacteriological examinations in 684 collected cases, which showed conclusively in what a small proportion of cases of chronic pyosalpinx there existed any serious danger to the peritoneum. In more than half the cases of pyosalpinx no organisms were found either by culture methods or film preparations.

Such conclusions strengthen the claims of the abdominal route in all chronic cases, especially if there are indications of extensive adhesions and an effort is to be made to save any portion of the appendages. Chronic gonorrheal cases are not good subjects for vaginal incision. There are usually larger amounts of exudate and adhesions, and the power of the gonococcus to remain latent for indefinite periods and give fresh trouble, has very properly forced the surgeon to proceed by the upper route and do radical rather than conservative work. Then too, gonorrheal infections have a tendency to become localized, after which the mortality by the upper route is reduced 20 per cent.

For much the same reasons tubercular abscesses are not to be attacked from below, since they are so generally attended with extensive exudates and it is so important to remove the initial focus of suppuration.

These foci are usually diseased, leaking tubes and simple incision of their walls will only give freer access of the bacillus to the general peritoneum. Acute suppurations arising in the puerperal state furnish a wide field for vaginal section. The post operative history in this class of cases is particularly good. Free incision usually means prompt recovery without disagreeable sequelae. I have saved two women during the past year from certain death by vaginal section, who I am almost positive, would have died on the table if the upper route had been followed. One of these was a case of general purulent peritonitis, who had been vomiting the typical coffee colored fluids for six hours, who had temperature of 105 ° and a pulse of 165, and enormous distention of the abdomen. The vault was opened and over a quart of purulent fluid gushed out, and the intestines prolapsed (showing that no adhesions had formed). A large drain was introduced high in the abdomen, and the woman was put to bed in a half sitting posture. The whole operation did not cover ten minutes, and she made a splendid recovery.

Thorough examination of the pelvis should be made every 24 hours of puerperal infections, and upon the first sign of palpable lesions involving the peritoneum, vaginal section should be urged.

As a practical working proposition it may be stated that in acute pelvic suppuration when the products of inflammation and

the pelvic organs are fused together in an unrecognizable state and the patient's condition is grave, vaginal section offers the best chances, whether the suppuration be parametric, tubal, or ovarian.

The operation of vaginal section is so often confounded with ordinary vaginal puncture, or incision, that a few lines devoted to technic would not be out of place.

The first requisition is thorough preparation of the patient for conditions may arise demanding the opening of the abdomen above, or a combination of both routes.

There is nearly always a strong indication for curetting the uterus as a preliminary to section, especially if there is hemorrhage or a purulent discharge. After such preparation a thorough bimanual examination is made to determine the size, consistency and, most important, the nearest point in the vault where the mass can be reached. This point is almost invariably in the posterior vaginal fornix. It is seldom necessary to drain laterally or in front of the cervix. With the cervix held downward and forward with volsellum forceps, a free transverse incision is made through the vaginal wall. If enough room is not secured by such an incision an additional perpendicular incision may be made from the centre of the first incision, care being taken not to injure the rectum.

With pressure over the abdomen as in bimanual examination the forefinger of the other hand is passed through the vaginal incision and made to penetrate the walls of the collection. If the abscess is situated high up the finger must be made to follow the uterus closely to avoid injury to coils of intestine. Accidental opening of the peritoneum does not add any material danger. The opening should be packed, or the finger kept in the aperture until the pus is drained off. After the abscess is drained the finger is again passed into the sac to search for other pockets, and drain all at the one sitting. It is often quite simple to drain a large abscess, but quite another matter to determine the nature and extent of the pathological changes and avoid injury of important surrounding structures.

If the collection is in the broad ligament the peritoneal cavity need not be opened. The layers are separated, beginning behind the uterus and dissecting outwards between the folds, and the fingers pushed into the mass, after which the proper drains are to be introduced.

After both sides of the pelvis are thoroughly explored and all masses penetrated, the first dressing should be made without any attempt to irrigate the cavities. Cleansing can usually be satisfactorily accomplished by gauze, while irrigation in the presence of a small peritoneal opening is exceedingly dangerous. If one is performing a vaginal section properly, there is no reason to resort to aspirators and needles. Such instruments are quite unreliable, dangerous, and usually prompt the operator to content himself with an ordinary puncture of the abscess. They fail in the presence of thick pus, old blood clots, often extend infection, and too frequently injure a bowel, a ureter, or an important blood vessel.

For some time I have employed both tube and gauze in drainage. The gauze cannot remain as long as drainage is necessary and is difficult to renew. Tube drainage is also objectionable in some cases, so a combination of the two with the rubber tube introduced with a barb so that it will not be easily pulled out, and a general packing of plain gauze is introduced. The gauze is not all removed until after five days, after which flushing through the tube is performed. The tube is cut off as the sac contracts, and is seldom entirely removed under 10 to 15 days in large abscesses.

DR. WALDEMAR T. RICHARDS read a paper entitled

Spinal Analgesia in Forceps Delivery ; Report of a Case.

Of late much has been written on spinal analgesia and of injections more or less successful. The contribution of an additional case may be of interest.

Mrs. N. S., age 41, primipara, labor began May 18, 1906, at 4 a. m. A midwife was in attendance. At 9 a. m. of the same morning I was called in because the patient seemed to be exhausted. Bag of waters had ruptured at 8:15 a. m. Patient was having a pain about every 5 minutes; examination showed no progress in fetus. While palpating the abdomen I was struck with the unusual pallor of the patient. Pulse was rapid and small. Surface of body cold but dry.

On vaginal examination I found presenting the first position. Head impacted in superior strait, anterior lip of cervix was swollen and very sensitive, bladder empty.

Stethoscopic examination elicited fetal heart sounds.

Owing to patient's age, narrowness of pelvis and exhausted state, I thought forceps were indicated. On examination of the heart I found an aortic obstructive murmur.

This cardiac condition at once made a general anesthetic dangerous. I began to look around for some other means. First used hot douches, scopalamin, morphin, cocain to cervix. Tried to apply forceps without an anesthetic, all without avail. I then attempted a general anesthetic, using first ether, then chloroform, with the result that on each occasion patient almost died. As a last resort I decided to use spinal puncture and prepared the patient. At 10:15 entered the spinal canal. The interspace between the 1 and 2 lumbar was chosen. I made the puncture while patient was lying on her right side; no difficulty was met with. Ten units of a 4 per cent. sol. of cocain was used. 7 minutes later a vaginal examination caused no pain. At 10:25 I applied a pair of Telsenreich forceps and delivered a live male baby, 7 1-2 pounds. As soon as I had clamped the cord I introduced 2 yards of iodoform gauze into the uterus. This was expelled with the placenta 1 hour and 16 minutes after injecting the cocain.

Patient spoke to me while I was manipulating the forceps; said that she felt absolutely no pain. After delivery the pulse dropped from 155 to 120; it was fuller and more quiet.

After delivery of the placenta the patient fell asleep and slept for two hours. There was no shock or untoward symptoms. She progressed through an uninterrupted recovery and was up in 10 days.

One feature that was of unusual and striking interest was the relief of excruciating backache less than five minutes after puncture.

DISCUSSION.

DR. LEBEUF asked about the contraction of the uterus after the completion of the second stage of labor? Did the doctor give any ergot?

DR. DELAUP: As an exponent of the method of spinal analgesia he wished to compliment the essayist on his splendid results. He was glad to see the method employed in obstetrics. Besides having made extensive use of it in genito-urinary and rectal work, he had

employed it recently in abdominal surgery (herniotomy and colostomy), with satisfactory results.

DR. MAES was very glad to hear the report of Dr. Richard's case because it seemed to him to be along lines very much neglected here, when we consider the favorable results obtained by reporters elsewhere. He had recently received the exhaustive report of Dr. Johnathan N. Wainwright, of Scranton, Penn., who had reviewed all the literature of spinal analgesia up to and including August, 1905. His report gives a survey of 16,000 cases of which 369 were in obstetrical practice, without a death. Observers are now reporting such excellent results with the newer analgesic drug, stovaine and novocaine, remarkably few patients showing any after effects, lead them to favor the use of these later drugs. The combination with adrenalin serving to localize and prolong the analgesia would make this especially servicable in obstetric practice. Wainwright, working along the lines suggested by Crile, has conclusively shown that this "nerve blocking" procedure finds its special field of usefulness in the avoidance of shock, which may accompany obstetric operations. As special indications for the use of spinal analgesia in obstetric work, we may mention all cases in which dystocia is due to abnormalities of the soft parts, more particularly rigid os. We may also mention intolerable pain; cases where manual dilatation, version or forceps operations are necessary and finally symphysiotomy and Cesarean Section have been performed, operators reporting less shock than when a general anesthetic was used.

DR. E. D. MARTIN: Four or five years ago, while attending a primipara, who complained and complained so much during the first stage of labor, had used the spinal puncture; this was followed by anesthesia, which lasted for two hours, when the pains returned stronger than before, and not being desirous of making a second spinal puncture, he delivered with forceps under chloroform. He can assert that it had had absolutely no effect on uterine contraction.

When bad after effects are produced by spinal puncture, he believes that it was almost invariably due to the employment of too large a dose. In forty-eight cases in which he had used spinal analgesia he found a fifth of a grain of cocain to be sufficient and with the exception of his first case, had not had any deleterious effects.

DR. MILLER: Marks, of New York, in a recent article, stated that uterine contractions were markedly increased by the spinal puncture and advised its use in uterine inertia.

DR. RICHARDS: The uterine contraction seem to have been increased by the spinal puncture. He had not given any ergot.

Another point which had been brought out by Marks in his paper was that when the uterine contraction and pain returned they were stronger. This was especially true of the latter, and he could not account for that. He had performed both a ventral fixation and trachelorrhaphy successfully under spinal analgesia. It was his experience that the anesthesia did not extend above the umbilical line, and he would like to hear from Dr. Delaup on that point.

DR. DELAUP: Analgesia from above the umbilical line is uncertain; it is possible that it may take place more readily if the horizontal position is assumed immediately after the spinal puncture. He had, however, seen it several times, one of those he had successfully performed a resection of the elbow joint.

Communication.

Editors New Orleans Medical and Surgical Journal:

DEAR DOCTORS—In a somewhat tardy reading of your May issue, I notice a letter by Dr. Arthur Nolte, concerning the United States Public Health and Marine Hospital Service. So far as the dispute about yellow fever is concerned I have nothing to offer, but I wish to protest against (1) the implication that partisan politics has anything to do with the service, and (2) that admission to the service is easy.

I passed the examination for admission to the service in 1896. Previously, I had graduated from two medical schools, one of them the University of Pennsylvania, which plucked about 20 per cent. of all applicants for a diploma, had had a good hospital service and had been studying, quizzing students, dissecting, etc., for a year with the Marine Hospital Service examination as an objective point. Notwithstanding this preparation, the examination seemed to me exceedingly difficult. It covered three or four days, included a

written examination in various subjects, which was more difficult than the average of college and State board examinations; clinical diagnosis on patients, with recourse to the laboratory for urine analysis, etc; staining of bacteria in the laboratory; operative work on cadavers; and an oral examination sufficient to establish a fair degree of general education. Of 12 or 15 applicants, only three passed. The year before about 25 applicants tried the examination and only three or four passed.

Regarding Dr. Nolte's point that non-graduates had entered the service, I may say that, in accordance with the printed directions, I had brought my diplomas with me, and as they were not asked for, I reminded one of the examining board of the requirement. He replied that they would take my word for the possession of a diploma; that their examination was so far superior to that of any college that previous graduation was not an important matter, and he cited the case alluded to by Dr. Nolte, as admitted by Surgeon-General Wyman.

I scarcely know whether I can be considered disinterested or not in this discussion. After being admitted to the service, I immediately waived appointment, for various personal reasons, chiefly because, being no longer forced to take a salaried position by lack of practice, I disliked the idea of being subject to orders from anybody else. At the same time, I have always felt an especial interest in the service, and did my best, in a humble way, editorially, to bring about the extension of scope in the service, represented by the addition of "Public Health and," to its original title.

One thing ought to be borne in mind by critics, without regard to possible differences of opinion in individual instances, namely, that submission to the authority of this service is an entering wedge in securing a strong national government, which will be able to cope with many problems already before the country, and against which the individual States are impotent. In particular, by holding up the hands of the U. S. P. & M. H. S., we can facilitate the securing of a medical representative in the cabinet.

Very truly yours,

A. L. BENEDICT.

N. O. Medical and Surgical Journal

Editorial Department.

CHAS. CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

The Reorganization of Tulane Medical College.

Since the acquisition of the munificent bequest of the late A. C. Hutchinson, the Board of Administrators of Tulane have considered the best manner of improving the Medical Department of the University. The first step in this direction has been accomplished through an arrangement by which the New Orleans Polyclinic becomes the post-graduate department of the Medical College.

The Polyclinic, for the past nineteen years, has filled an important position in the community, not only having met the demand for advanced medical instruction, but at all times sacrificing the interests of the individual to the improvement of the facilities of the school. Having the record of being the third post-graduate school in actual date of establishment in the United States, the New Orleans Polyclinic has met the demands of a constantly growing attendance since its incipency, and today is, perhaps, better known through the Southern and Gulf States than any other schools of its kind. The Tulane Board has evidently recognized these things and in the interest of Tulane has sought and accomplished the amalgamation of this with the Tulane Medical Faculty. The entire Polyclinic Faculty will constitute the post-graduate Medical Department of Tulane, and the added opportunities should attract an even wider attention and correspondingly increased attendance.

Medical education in New Orleans has at all times been a matter of importance, even though the fullest advantage has not been taken of the opportunities. These have been especially great in New Orleans, because of the concentration of interest in the two schools, each fulfilling its own purposes.

The Tulane Medical College, in recent years, has materially

improved its standards and methods, while the Polyclinic has always worked for post-graduate interests and high medical ideals. The combination of these two in one institution, with a common broader interest, with better facilities afforded under the Hutchinson bequest, must mean a great future for New Orleans as a medical center of the first-class. The Tulane Board, in this matter, has shown not only a practical interest in the welfare of the university, but in the pride and future of the city itself, for the new faculty of Tulane Medical College, post-graduate and under-graduate, will include all the teachers in medicine, identified with medical education in New Orleans for the past quarter of a century.

Altogether this radical change in medical education in New Orleans is a matter of congratulation. For the Polyclinic, in the recognition of merits and long service; for the Tulane Board and the President of the University, Dr. E. B. Craighead, in their wisdom, farsightedness and public spirit, and for the Tulane Medical Department in the valuable acquisition to the teaching forces.

The Reed Memorial and the South.

Perhaps no better occasion can offer than now to recall the obligation the Southern States owe to Walter Reed, surgeon in the United States Army, martyr to the science of medicine. The successful protection of New Orleans and the entire South as the result of the demonstration of the mosquito theory and its practical adaptation last year and this year, stand in themselves as a monument to the experiments which Reed shared. His humanitarian achievement, however, has deserved a higher recognition, and for some time the movement has grown toward the erection of a suitable monument, to be erected from the funds subscribed to that end.

The JOURNAL called attention to this worthy cause early this year, but we have been both surprised and pained to learn that the entire subscription, from all sources, so far received from the South has barely amounted to \$300.

Major Reed was a Virginian, therefore deserving of the South, as he is worthy, and it seems a shame that more interest has not been taken in this cause.

In consideration of the fact that the widow and daughter are left with but little property, an effort has been made to raise a fund of \$25,000, the income of which should go to Mrs. Reed and daughter during their lives, subsequently to be used for a permanent memorial, presumably in Washington, for Dr. Reed as a benefactor of the human race.

The *Picayune* of August 13 has put the burden of action upon the Southern people, and the appeal should not go unheard or unheeded. The movement is especially worthy, but more, the world is so slow to recognize medical effort that wherever this contemplated honor may be proclaimed, the medical man should declare it and to the end that he may add to the good of the cause by urging subscriptions.

Both President Charles W. Eliot, of Harvard University, and President D. C. Gilman, of Johns Hopkins, are earnestly furthering the cause, and we should not tarry in rendering due and practical honor to the memory of the man who has not only honored our profession, but who helped to advance knowledge by worthy study.

While it is proper that the lay subscription should grow strong, it is none the less the duty to the medical men of the South to add to the fund. Subscriptions will be received and acknowledged by either Dr. Eliot of Harvard, or Dr. Gilman at Johns Hopkins.

A National Obligation.

It is to be hoped before another session of the National Congress has passed that some provision will be made for governmental care of leprosy. Legislation has more than once been attempted, but it seems difficult to get the Representatives and Senators to see the need of provision at home, although some \$250,000 have been voted for the investigation and care of leprosy in the Sandwich Islands, etc. The recent experience with the Syrian leper in Maryland and West Virginia, which points to the need of some established institution for these cases. Fully 60 per cent. of the United States have one or more lepers, and the tendency is to increase in the number of these. It is only the occasional notoriety which attaches to the case that creates public interest, but every day

cases are seen in the larger cities, and travel about without hindrance. Louisiana has gradually established some control of the disease, but in Mississippi, Texas, Alabama, and in Arkansas, there is no attempt at protection of the public, although cases of leprosy are even now at large in some of these. At least five points in Texas have one or more cases of the disease, and, without hindrance, these are rather certain to have focuses for fresh infection.

A national leper hospital is needed, and it should be equipped for the best care and treatment of these cases. It has been demonstrated that segregation reduces the danger of spread of the disease, and at several of the institutions in countries where cases are accumulated, the successful amelioration and even cure of these unfortunates have been related.

With even limited opportunities, the United States Army Service in the Phillipines have done good work with leprosy, and with the establishment of an asylum under their control the surgeons of the Public Health and Marine Hospital Service could do more.

Pathologic Specimens by Mail.

We have been requested by the President of the State Board of Health to mention that the Post Office Department had complained of the sending by mail of a specimen of sputum from a case of suspected tuberculosis not packed as required by the postal laws and regulations. Only samples which have been rendered innocuous by the addition of a disinfectant may be sent to laboratories having permits, simply when put up in the manner required for the admission of any liquid in the mails.

For the information of such of our readers as may desire to forward samples of suspected sputum, liquids, or diseased tissues, we print elsewhere the order of the Postmaster General describing the conditions under which such specimens may be admitted to the mails.

A Worthy Honor.

{Dr. A. W. de Roaldes was elected President of the American Laryngological Association at their last meeting. Dr. de Roaldes has deserved this distinction as he has done more for this division

of medical science than any one else in the South, and for many years has worthily represented New Orleans and the South in the Association.

Abstracts, Extracts and Miscellany.

Department of Surgery.

In Charge of DR. F. W. PARHAM, Assisted by DR. F. LARUE, New Orleans.

DRAINAGE OF THE INTESTINE IN ACUTE OBSTRUCTION.—Moy-nihan, in the *Archives Internationales de Chirurgie*, Vol. III, Fascicule No. 1, says "it has long been recognized that the relief in cases of acute intestinal obstruction does not depend alone upon the setting free of an ensnared loop, the liberation of a strangled coil, or the unraveling of a twisted bowel, but equally, at least, in the evacuation of the engorged intestine, in the emptying from the gut above the obstructed point of the retained contents."

The mere release of the bowel from the entanglement is but a part of, and not always the most important part of the operation. An operation may be successfully completed apparently and yet the patient may die rapidly from toxæmia, due to the absorption of matter retained behind the block. Sir Frederick Treves rendered a great service by insisting upon the emptying of the intestine when released from its obstruction. Thereby the mortality from intestinal obstruction was lowered fifty per cent.

While it is generally recognized that the intestine should be emptied, all methods have involved the serious risk of contamination by escaping feces, and they are, too, open to the objection that they only empty a few feet of the gut.

Moy-nihan describes a method of his own, which he finds simple, efficient and safe. It consists in emptying the bowel through a glass tube, eight or nine inches in length, which is passed upward within its lumen, the bowel being then drawn on to the tube gradually until six or seven feet are threaded.

The obstruction having been released, a loop of the bowel about

a foot above the obstruction is drawn out on to the surface of the abdomen on a hot moist swab. A clamp is then put on at the lower end of the loop, the bowel is then milked for a distance above and another clamp put on, a three-quarter inch incision is now made in this segment of emptied bowel along a line opposite the mesenteric attachment. Into this the glass tube (of special pattern) is inserted and pushed upward until the upper clamp is reached. The tube may now be fastened securely by drawing an elastic tube through the mesentery and tying it around the bowel. The upper clamp being removed the tube is pushed gently upward into the bowel as far as it will go. The bowel where the tube enters is surrounded with gauze and held firmly by the surgeon, while the bowel above is pulled over the tube until some six or seven feet of gut are pleated on the tube. A rubber tube connected with the glass tube conducts the intestinal contents safely away from the abdomen. The bowel being emptied is pulled from the tube, wiped off gently and replaced within the abdomen. As the glass tube is about to be withdrawn from the opening in the bowel a clamp is put on above, the wound in the bowel is washed and sutured, the lower clamp removed and the abdomen closed.

The advantages of the method are apparent and it is well worthy of trial in all cases of intestinal obstruction where there is much distention. The tubes are made in three sizes, $\frac{1}{2}$, $\frac{3}{4}$ and 1-inch in diameter, and $9\frac{1}{2}$ inches in length.

GUNSHOT WOUND OF THE CHEST.—Mr. Routier, in "*La Tribune Medicale*" (June 19, 1906), relates the case of a young man *aet* 24 years, with a gunshot wound of the chest. The bullet perforated the middle of the sternum. Signs of severe internal hemorrhage existed; the condition of the patient was so precarious that Mr. Routier decided not to interfere, fearing thereby a fatal outcome.

Ice bag to the thorax and morphine were resorted to.

The following day the heart was displaced to the left, four fingers breadth from the nipple. Dullness was more complete to the right. Skoda's tympanic note was likewise more pronounced in the corresponding subclavicular region. Mr. Routier aspirated one quart of dark blood. The ominous signs diminished and the patient seems to be on the way to recovery. Mr. Routier is convinced that immediate intervention would have resulted disastrously.

Department of Obstetrics and Gynecology.

In Charge of DR. P. MICHINARD and DR. C. J. MILLER, of New Orleans.

FORCEPS, VERSION AND CRANIOTOMY.—Geo. T. Brodhead prefers high forceps operation to podalic version in cases with normal pelvis and fetal head measurements, and especially when the fetal head is relatively large, and when labor has been protracted, with early escape of amniotic fluid. The axis traction forceps of Tarnier is the forceps preferred. Brodhead's rule in normal labors is to use the forceps, if after one or one and a half hours there has been little or no advance, in dry labor after one hour (in the second stage, if there is no advance. There are many cases where, by early and intelligent use of the forceps, laceration of the perineum may be prevented. The operation of forceps rotation for occipito-posterior positions is entirely feasible and of great practical importance. Cephalic version is to be undertaken only before the amniotic fluid escapes, prior to, or during the early part of labor. It is performed for such malpresentations as face, brow, shoulder, transverse and breech presentations. Combined cephalic version is indicated in only shoulder presentations. Internal podalic version, by far the most frequently used, is indicated in malpresentations, deformed pelvis, prolapsed cord, uterine inertia, eclampsia placenta previa, etc. When there is no need of haste, one foot, preferably the anterior, should be brought down, both feet may be seized if there is need of haste, and the cervix is dilated. Version and forceps are elected in many cases where craniotomy would be attended by far better results. Use of the cephalotribe is attended by less danger than a protracted forceps operation, or a difficult version. The author makes a strong appeal for its more frequent employment when the child is dead.

UPON THE RECOGNITION OF TUBERCULOSIS OF THE FEMALE GENITAL ORGANS (By Oscar Nebesky).—This author, writing from the clinic of Prof. Eherendorfer in Innsbruck, calls attention to the prevalence of tuberculosis of the pelvic organs. Some believe

that tuberculosis is never primary in the pelvic organs, while the larger number of observers believe that it generally is primary. Certain it is, however, that the tubes are more commonly involved than the other pelvic organs, the proportion varying in different series of cases, some as Targett, claiming that the tubes are involved in ninety per cent of the cases. Späth, in 119 cases, found tuberculosis of the uterus and tubes in 66 cases; uterus, tubes and ovaries, 5 cases; of the vagina, 9 cases; of the uterus, 10 cases; and ovaries 15 cases. The subjective symptoms generally noted are amenorrhea, sterility and leucorrhea.

There is generally a family history of tuberculosis. Amann and Fruzzi call attention to the fact that there is generally hypoplasia of the genitals. Sellheim speaks of an irregular shaped tumor mass, which is tympanitic on percussion, existing together with ascites and the beaded-like feel of the tubes which constitute Hegar's sign. The prognosis of course, depends upon many things. The general condition of the patient, the extent of involvement of disease, the method of treatment, must be taken into consideration. The latter treatment depends upon many things. The general condition of the patient, the extent of involvement of the disease, the method of treatment must be taken into consideration.. The treatment is generally operative, and, whenever possible, all the diseased tissue is removed, although some, as Amann, believe that climatic treatment, sun baths, hot air treatment, etc., give the best results. The author reports a case operated by Ehrenclorfer, a salpingo-hysterectomy being performed, the disease being limited to the uterus and tubes.—*Monatscheft für Geburtshülfe and Gynecologie*.—*Exl. Surgery, Gynecology and Obstetrics*.

Department of Internal Medicine.

In Charge of DR. E. M. DUPAQUIER, New Orleans.

A POINT IN MITRAL DISEASE.—Babinski, of Paris, has clearly established how valuable are the pupillary reactions to the internist.

The Argyll-Robertson syndrom associated either with aortic lesions or with an incomplete symptomatic of tabes dorsalis is now an accepted clinical fact, and it shows that the cause is syphilis. Hence, the proper directions for specific treatment eliminating at once the other two common causes, namely trauma and rheumatic infection.

Cases have been recently reported wherein the eye-symptoms have indicated plainly that syphilis was the cause of cardiac lesions at other points than the aortic, for instance cases of mitral incompetency.

This is an information of great importance and should not be neglected.—*Gazette des Hôpitaux*, June 21, 1906.

APPENDICITIS AND TYPHLO-COLITIS.—A number of cases have been operated upon for appendicitis in which the appendix proved to be in its integrity. Now and then, in the literature, from all sources, reports of that kind have appeared. Perhaps every one of us has seen it occur in his own practice, where the colic, due to mucous disease or pseudo-membranous enteritis has been mistaken for appendicitis. Dieulafoy collected over 300 cases of erroneous diagnoses and uncalled-for operations. Though he is persuaded that there is no other treatment than the surgical in appendicitis, and though he always was a warm advocate of surgical treatment in more than one of the so-called internal diseases, yet he believed it was time to call a halt. The public and the profession have been so much engrossed by the ever-present appendicitis that nothing else could possibly exist, in their minds, to cause the abdominal trouble. Yet, it is a fact, that typhlo-colitis simulates appendicitis very closely. And, besides, it is quite common and should be looked for. Therefore, we are all invited to be most careful in differentiating the one from the other.—*Ibid.*

CARBOHYDRATE WANTED IN PROPORTION AS TOLERATED.—Because assimilative power, in diabetes, may be regained so as to permit of a more or less complete return to ordinary food, it does not follow that things will always remain in this position, and especially so, if indiscreet indulgences are allowed to occur. Persons are apt, when they get back to ordinary food, to think that they are exempt from liability to a return of the sugar. This is not the case, and unless caution is exercised a relapse that may

grow into one of a severe nature may, even after a period of some years, set in, requiring for relief, if such is again obtainable, a return to the treatment that was before adopted.—(On Carbohydrate Metabolism. F. W. Pavy, London.)

Department of Therapeutics and Pharmacology.

In Charge of DR. J. A. STORCK and DR. J. T. HALSEY, New Orleans.

A DEATH FROM SCOPALAMIN.—Rys reports the death of a boy of 15, to whom was given one hour apart, two hypodermics, each containing 0.0005 g. ($1/120$ gr.) of scopolamin and 0.0125 g. ($1/5$ gr.) of morphin for the purpose of inducing general anesthesia. It was necessary, in addition, to give chloroform. Twelve hours later the patient began to have convulsions, circulatory and respiratory weakness developed. Seven hours later the patient died. [In view of the enthusiastic and unreserved praise from many sides, of this newer method of inducing general anesthesia, this report comes as a timely warning. Scopolamin closely resembles, if it is not identical, with hyoscin, a drug whose great toxic powers are well known. Apparently the advocates of scopolamin-morphin anesthesia have, to a greater or less degree, lost sight of the danger unavoidably associated with the use of this combination.]

NEPHRITIS DUE TO BALSAM OF PERU.—Richarz (*Munch. Med. Moch.* No. 19, 1906.) reports a case of acute nephritis with fatal termination in a girl of 16, who had been using balsam of Peru as an ointment. He urges caution in its use, and observation of the urine. [A number of other clinicians have recently reported acute nephritis resulting from the use of balsam of Peru in cases of scabies. The reviewer has twice seen albuminuria of moderate degree follow a scabies cure.]

DIABETES INSIPIDUS.—V. Kettly, Budapesth, reports four cases of diabetes insipidus treated by hypodermic injections of strychnin. One was apparently cured (under observation two months after treatment stopped), two markedly improved and one unimproved.

A number of other favorable results of similar treatment are recorded in the literature of the last two years. V. Kettly advises making a thorough test of this treatment in all cases of this usually intractable disease. The method is to give daily hypodermic injections of strychnin nitrate commencing with 0.0005 g. (1/120 gr.) and increasing every second day by 0.0001 g. (1/600 gr.) until finally 0.01 g. (1/6 gr.) is given. [Note that 1/4 gr. has caused death.]

THE TRYPSIN OR PANCREATIC TREATMENT OF CANCER.—In *McClure's Magazine* for August, the trypsin or pancreatic cure of cancer is exploited by C. N. Saluby, M. D., F. R. S., of Edinburgh. Referring to this article, also to Dr. Beard's hypothesis of cancer and the trypsin or pancreatic cure of the disease, the *Journal of A. M. A.*, in its issue of August 4, writes editorially as its concluding paragraph:

"Comment seems hardly necessary, because there is no record here of any cure of cancer. The facts in regard to the cases are totally inadequate for an outsider to form any correct opinion of the actual state of affairs, and the manner in which the facts are given show that the reporter is not only highly inexperienced, but also deeply prejudiced. It is evident that this kind of exploitation of the trypsin treatment of cancer should cease. It is not at all creditable to its advocates. If there are facts available bearing on the true merits of this treatment let them be published fully so that their significance may be appreciated. Incomplete, premature, sensational announcements do harm only."

IMPERIAL DRINK.—This useful diuretic may be prepared simply as follows: Dissolve a large teaspoonful of cream of tartar in one pint of boiling water, add a little sugar, and a little lemon for flavoring. When cold the whole should be strained. Another method of preparing Imperial Drink is as follows:

Acid potassium tartrate.....	1 ounce
Tartaric acid	1 ounce
Oil of lemon	12 minims
Refined sugar	16 ounces
Boiling water	1 gallon

—*The Practitioner.*

Department of Ear, Nose and Throat.

In Charge of A. W. deRoaldes, M. D., and Gordon King, M. D.,
New Orleans.

ANGIOMA TREATED BY INJECTIONS OF HYDROGEN PEROXIDE.—A case is reported by Georges Mahu, of Paris, of an angioma of the left naso-labial region which he succeeded in eradicating by the injection into the tumor of a few drops of hydrogen peroxide. The angioma was taken to be a nevus which had undergone angiomatous change, developing to the size of a small nut within two years, and had been subjected with little benefit to a treatment by electrolysis. At the suggestion of a confrère Mahu injected the peroxide and soon had the satisfaction of seeing the vascular growth almost entirely disappear.

The action of the peroxide seems to result in obliteration of the blood vessels composing the tumor, and the author claims that no danger of producing an embolus is incurred by the injection, experiments on animals having proven that a considerable quantity of the drug can be injected into the circulation without harmful effects. Pain and tumefaction of temporary duration follow the injection as a result of the gaseous decomposition of the peroxide in contact with the blood.—*Annales des Maladies de l'oreille*, etc., June, 1906.

RESECTION OF THE EXTERNAL CAROTIDS FOR ADENO-SARCOMA OF THE THROAT.—The remarkable case of this nature reported by Dr. W. R. Dabney, of Ohio, was that of a woman 53 years of age, having a growth involving the naso-pharynx, the right tonsil, and the region of the lingual tonsil. The growth showed signs of malignancy, and microscopical examination showed it to be an adeno-sarcoma, with metastasis in the lymphatics of the neck.

Extirpation of the tumor was deemed useless. Palliative treatment was prescribed until the patient was on the point of death from asphyxia and inanition when it was decided to resect the external carotids with the hope of giving some relief. This was subsequently done, and rapid improvement took place, the patient gaining in weight and strength and the tumor masses diminishing to one-fifth the size they were when the operation was performed.

Seven months later the patient was still improving and bade fair to live a long while.

The author does not claim that the case is cured, and expresses surprise at the great improvement brought about. He fears, however, that there will be a recurrence in the virulence of the growth ultimately. *The Laryngoscope*, May, 1906.

LOCAL ANESTHESIA OF THE EXTERNAL AUDITORY CANAL AND TYMPANUM.—Von Eiken, who has made some interesting studies on anesthesia of the ear, has recently published an article in the *Zeitschrift fur Ohrenheilkunde* in which he describes a method of obtaining complete local anesthesia of the entire ear canal and tympanum. For the external parts he begins by spraying with ethyl chloride and then follows with an injection of cocain and adrenalin solution in the posterior fold of the pavilion under the cartilage of the floor of the canal. The needle is directed upwards and backwards to reach the point of emergence of the auricular branch of the pneumogastric which is the sensory nerve of the posterior part without completely with drawing the needle the point is then forced towards the anterior and deeper part of the canal to attain the auriculo-temporal filaments.

Complete anesthesia of the external canal is thus obtained in one or two minutes. The tympanum is next anesthetized by injecting the solution into the skin of the deeper part of the canal.

Department of Ophthalmology.

In Charge of Drs. BRUNS and ROBIN, New Orleans.

THE IMMEDIATE AND LATE RESULTS OF THE REMOVAL OF THE TRANSPARENT LENS IN HIGH MYOPIA.—Fritz Huber tried to follow up the history of 100 eyes, upon which Haab had operated for high myopia. Of this number 75 only could be traced for three to ten years after final operation. He finds that the operation does not act as a check against the development and the progress of the complications of myopia. Thus, he finds macular changes to develop in 14.67% of the operated, although the vision

was thereby impaired only in a minority of cases, and only 7.02% of the non-operated eyes.

Similar conditions prevail with regard to the development of opacities of the vitreous, of retinal hemorrhages and of retinal detachment, which occurred in five cases (never in the non-operated eye). One more eye became blind by glaucoma, and one through sepsis after final discission (the only one of the series). With regard to the refraction resulting immediately after and some years after final operation, the following table may be given:

	Emmetropia	Myopia	Hypermetropia
Immediately after operation	17	12	71
3—10 years after operation.....	33.33	17.39	49 28

Thus, the emmetropic eyes have nearly doubled while the number of myopic ones have only slightly increased. Huber concludes that removal of the lens is no palliative against the progress of myopia, and that it is our duty to instruct the patients to save their eyes after the operation as well as before, as they are then quite as vulnerable as formerly.

De Font Rêaulx is struck by the fact that although a large number of cases of high myopia have been treated by removal of the transparent lens, comparatively few ophthalmic surgeons appear to practise the operation. With a view to explain this, and to fix indications for the treatment, he has examined the records of the published cases. He pays particular attention to those which have been kept under observation for periods of five years and upwards, and records six new cases belonging to this class from Trousseau's patients. As a result of his investigations he has reached the following conclusions: The treatment is a good one, but serious, owing to the risks, immediate and remote, inseparable from the numerous operations which may be necessary, and the long time during which the patient may have to remain under observation. It appears to increase the tendency to retinal detachment, and does not influence the development or progress of choroidal lesions or present the elongation of the eyeball, although it may check the latter, which is less easily recognized, because a given amount produces only half as much increase in myopia as it

would in an eye from which the lens had not been removed. The sole good result to be expected is the decrease of the short sight and improvement in distant vision, but unless the operated eye remains myopic enough to read without lenses, the unoperated one is preferred for near work. The treatment should only be undertaken when the myopia amounts to at least 20 D., after fully considering the position of the patient and the requirements of his occupation (especially with regard to binocular vision and near work) and after explaining to him the possible risks and advantages of the procedure.—*Ophthalmoscope*, July, 1906.

Louisiana State Medical Society Notes.

In Charge of DR. P. L. THIBAUT, Secretary, 141 Elk Place.

NEXT MEETING: NEW ORLEANS, MAY 14, 15, 16, 1907.

OFFICERS—President, Dr. Henry Dickson Bruns, New Orleans; First Vice-President, Dr. Charles McVea, Baton Rouge; Second Vice-President, Dr. George F. Wilson, Bienville; Third Vice-President, Dr. A. J. Perkins, Lake Charles; Secretary, Dr. P. L. Thibaut, New Orleans; Treasurer, Dr. Jules Lazard, 830 Canal Street, New Orleans.

COUNCILLORS—Chairman, Dr. E. J. Graner, 2d Cong. Dist., New Orleans; Secretary, Dr. J. L. Scales, 4th Cong. Dist., Alden Bridge, La.; Dr. P. E. Archinard, 1st Cong. Dist., New Orleans; Dr. J. Wofford Sanders, 3d Cong. Dist., New Iberia, La.; Dr. S. L. White, 5th Cong. Dist., Ruston, La.; Dr. C. M. Sitman, 6th Cong. Dist., Greensburg, La.; Dr. C. A. Gardiner, 7th Cong. Dist., Sunset, La.

MINUTES OF 1906 MEETING.

(Continued from last month.)

SECOND DAY, MORNING SESSION.

Minutes of preceding day read and approved.

DR. F. H. WATSON read a paper entitled "Multiple Malarial Infection; Report of a Case of Quadruplicate Tertian Malaria," which was discussed by Drs. Thiberge, Allen, Guthrie, Scales, Martin and Thornhill.

DR. GRANGER introduced Drs. Neville and Dickerson, of Mississippi, and moved that they be extended the privileges of the floor. The motion was carried by unanimous consent.

DR. MARTIN moved that the regular order be suspended for a few moments in order to give Dr. Fenner an opportunity to present

a case showing result of operation for "Spina Bifida." The motion was carried, and Dr. Fenner exhibited the case.

DR. J. A. STORCK read a paper on "Gastric Disturbances Due to Diseases of the Frontal Sinus."

DR. HENRY DICKSON BRUNS read a paper entitled "What Every Physician should know of Ophthalmology," which was discussed by Drs. Dowling, Jamison, Sartor, Carruthers and Dortch.

DR. PATTERSON called up his motion of the previous day to amend the by-laws relating to membership of Committee on Nominations. The motion to amend was lost.

A recess was taken to permit the members of the different districts to meet and to elect representatives for the Nominating Committee. After the recess the following were announced as members of that committee:

COMMITTEE ON NOMINATION, 1906—First Congressional District: Drs. Homer Dupy and W. H. Robin, New Orleans. Second Congressional District: Drs. Charles Chassaignac and Wm. M. Perkins. Third Congressional District: Drs. J. J. Ayo, Lafayette (Lafourche), and C. J. Edwards, Abbeville (Vermillion). Fourth Congressional District: Drs. Oscar Dowling, Shreveport (Caddo), and A. B. Nelson, Arcadia (Bienville). Fifth Congressional District: Drs. O. M. Patterson, Bastrop (Morehouse), and C. L. Ramage, Winsboro (Franklin). Sixth Congressional District: Drs. J. A. Caruthers, Baton Rouge (East Baton Rouge), and A. F. Barrow, St. Francisville (West Feliciana). Seventh Congressional District: Drs. W. R. Boudreau, and J. L. Wilson.

The Council recommended the adoption of the following resolution:

That it is the unanimous opinion and suggestion of the Council, that the medical profession of the State of Louisiana ought to be represented on the Board of Administrators of the Tulane University of Louisiana, by a practicing physician, who is a member of the Louisiana State Medical Society. Your worthy president has appointed a Committee on Medical Education, which has for its object the elevation and raising the standard of medical education.

The American Medical Association is working with a similar committee on the same lines.

The legal profession is well represented on the Board and we believe that the medical profession should be likewise recognized.

We, the Council of your honorable Society, suggest that a motion be unanimously passed on these lines, addressed to the Board of Administrator of Tulane University of Louisiana, requesting that this be done.

Carried.

DR. GRANGER read a paper on "The Importance of a Knowledge of Electro-Therapeutics to the General Practitioner of Today," which was discussed by Dr. Thiberge and Keitz.

Adjourned to lunch.

SECOND DAY, AFTERNOON SESSION.

DR. J. BIRNEY GUTHRIE presented a series of charts showing "Blood Pressure in Yellow Fever."

DR. WARREN STONE BICKHAM read a paper on "The Operative Surgery of the Spine and Cord," which was discussed by Drs. Matas, Parham, Gessner, P. E. Archinard, Fenner, Van Wart, Bloom, Martin, and W. M. Perkins.

DR. PAUL MICHINARD read a paper on "Menorrhagia and the Microscope."

DR. E. T. NEWELL read a paper on "Cyst of the Round Ligament Simulating Hernia."

DR. E. D. MARTIN read a paper on "Lacerations of the Posterior Vaginal Wall: Importance of Their Diagnosis and Repair."

DR. E. D. FENNER read a paper on "Spina Bifida; Report of a Case."

DR. L. G. LEBEUF read a paper on "The Diet and Handling of the New-born."

DR. THIBERGE moved that the thanks of the Society be extended to Dr. Bickham. Carried unanimously.

Adjourned.

SECOND DAY, NIGHT SESSION.

The President, Dr. C. J. Ducote, delivered the annual address.

Hon. HENRY P. DART delivered the annual oration on "The Relation of the National and State Quarantines."

Upon motion of DR. LEBEUF, the Society extended a vote of thanks to Mr. Dart.

DR. W. H. SANDERS read a paper on "Co-operation among the Southern States in the Prevention and Control of Epidemics."

DR. MAYER moved that the thanks of the Society be tendered Dr. Sanders. Carried.

Adjourned.

(To Be Continued Next Month.)

Medical News Items.

ASSUMPTION PARISH MEDICAL SOCIETY.—The Assumption Parish Medical Society held its regular bi-monthly meeting in Labadieville Thursday, August 2, 1906. The scientific program consisted of a paper upon "Malarial Enteralgia, with the Report of a Case," by Dr. H. C. Danserau. Dr. A. J. Himel reported a "Case of Pernicious Vomiting of Pregnancy." The following resolution was adopted: "Resolved, that the undersigned members of the Assumption Parish Medical Society, and qualified practitioners of said Parish, do hereby enter into and bind ourselves to the following agreement, to-wit: That on and after the first day of August, 1906, we will not examine applicants for insurance in the 'old line companies' for less than five dollars (\$5.00) for each examination."

Signed, Augustin J. Himel, Adrian A. Landry, Thos. B. Pugh, H. C. Dansereau, Fulton Rogers, Hy. A. LeBlanc. A. A. Aucoin, W. E. Kittredge, Clifford Himel.

The following was also adopted: Resolved, That the Ascension and Lafourche Parish Medical Societies and all regularly qualified physicians of said parishes be invited to join the Assumption Parish Medical Society in the organization of a District Medical Society for the purpose of establishing closer professional relations and good fellowship among the physicians of the Lafourche District. After refreshments at the residence of Dr. Dansereau the meeting adjourned.

PATHOLOGICAL SPECIMENS BY MAIL.—Considerable agitation in this matter has recently occurred, occasioning amendments to existing regulations by the Postmaster General. These follow:

Specimens of diseased tissues may be admitted to the mail for transmission to United States, State, or municipal laboratories, only when enclosed in mailing packages constructed in accordance with

the specifications hereinafter enumerated: Liquid cultures, or cultures of micro-organisms in media that are fluid at the ordinary temperature (below 45° C or 113° F.) are unmailable. Such specimens may be sent in media that remain solid at ordinary temperatures.

Upon the outside of every package shall be written or printed the words "Specimen for Bacteriological Examination. This package to be treated as letter mail." No package containing diseased tissue shall be delivered to any representative of any of said laboratories until a permit shall have first been issued by the Postmaster General certifying that said institution has been found to be entitled, in accordance with the requirements of this regulation, to receive such specimens.

Specifications for the construction of packages for safely conveying through the mails pathological specimens for bacteriological examination for diagnosis in cases of suspected diphtheria, tuberculosis, and other communicable diseases:

(1) The receptacle for moist specimens of diseased tissues shall be a strong glass vial or test tube having a capacity not greater than two drams. Said vial shall be covered and made water-tight by the use of a metal screw cap and a rubber or felt washer which has been immersed in melted paraffine; or if a test tube be used, it shall be covered with a tightly-fitting rubber cap.

(2) Said vial or test tube shall be placed inverted in a circular tin box. Said box shall be made of I. C. Bright tin-plate, and shall have flush or countersunk bottom, soldered joints, and not be smaller than one and one-eighth inches in diameter and three inches long, nor larger than two and one-quarter inches in diameter and five and one-half inches long. This box shall be closed by a metal screw over and a rubber or felt washer, or tightly-fitting metal sliding cover, and it shall be so packed with absorbent cotton that the glass or test tube contained in said tin box shall be evenly surrounded on all sides by said cotton and the cotton shall be closely laid.

(3) Said tin box shall be placed inverted inside of a larger tin box similar to the one already described, which should snugly receive the specimen box. Upon the inside of the sides and bottom of this outer box there shall be a lining of compressed paper not less

than three-sixteenths of an inch in thickness. Said outer tin box shall be closed by a metal screw cap and a rubber or felt washer; or this outside box may consist of hard wood, being a block having a cylindrical hole bored in one end and extending to within not less than one inch of the opposite end; the open end to be closed with a wooden or metal screw cap with a rubber or felt washer. Or the outside box may be a cylindrical wooden box having a screw cap and washer. The thickness of the sustaining part of the wooden tube to be not less than one-quarter of an inch and be lined same as the tin box.

(4) The receptacle for dry specimens of diseased tissues shall be a glass test tube, three inches in length and one-half inch in diameter. Said test tube shall be enclosed in a circular tin box similar to those already described, but measuring two and one-quarter inches in diameter and five and one-half inches in length, and be lined upon its sides and bottom with compressed paper not less than one-quarter of an inch in thickness. Said box shall be closed by a metal screw cap and a rubber or felt washer. Said test tube shall be closely packed in cotton.

PERRY S. HEATH, *Acting Postmaster General.*

THE XIV INTERNATIONAL CONGRESS FOR HYGIENE AND DEMOGRAPHY will take place from the 23d to the 29th of September, 1907, in Berlin. The Committee of Organization, under the presidency of Mr. Bumm, President of the Imperial Board of Health, has advanced the preparatory work for the Congress to such a degree that the invitations will be shortly issued. The work of the Congress, which will probably take place in the vicinity of the Reichstag, is divided into 8 sections: Section 1, *Hygienic microbiology and parasitology*; Section II, *Dietetic hygiene, hygienic physiology*; Section III, *Hygiene of childhood and schools*; Section IV, *Professional hygiene and care of the working classes*; Section V, *Combating infectious diseases and care of the sick*; Section VIa, *Hygiene of dwellings and townships*; Section VIb, *Hygiene of traffic*; Section VII, *Military, colonial and naval hygiene*; Section VIII, *Demography*. The direction of a scientific exposition combined with the Congress has been undertaken by Professor Geheimer Medizinalrat Dr. Rubner, Berlin N. 4 Hessischestr. 4. The busi-

ness of the Congress is conducted by the Secretary General, retired Surgeon Major Dr. Nietner, at Berlin W. 9, Eichhornstr. 9.

SOUTHWESTERN MEDICAL ASSOCIATION is the name of a proposed association for Missouri, Texas, Kansas, Arkansas and Oklahoma. The objects are said to aim at uniformity in registration laws, etc.

PUBLIC HEALTH AND MORALS.—The daily press reports that a conference has been called to meet at the Hudson Theatre, in New York, on Nov. 15 next, to organize a national society, the purposes of which are to obtain and disseminate information of practices and conditions that are dangerous to the public health and morals. It is announced that the proposed society will work for the enactment and enforcement of all laws for the prevention of quackery and criminal practices in the healing art, the prevention of adulteration and substitution of drugs and food substances and "the prevention of the sale of alcohol and narcotics and other dangerous substances sold under the guise of proprietary remedies."

The following organizations have, it is said, endorsed the movement, and will have delegates at the conference: American Medical Association, Young Woman's Christian Society, National Women's Christian Temperance Union, Academy of Medicine, National Association for the Study and Prevention of Tuberculosis, Salvation Army and the Epworth League of the Methodist Episcopal Church.

THE EXECUTIVE COMMITTEE OF THE AMERICAN ANTI-TUBERCULOSIS LEAGUE held a meeting recently at Atlanta and elected Dr. Geo. Brown President.

The next meeting will be held at Atlantic City, New Jersey, in June, 1907.

PERSONALS: Dr. A. W. De Roaldes has been elected President of the American Laryngological Association. The next meeting will be in Washington, D. C.

Dr. F. W. Parham has been elected a member of the Board of Administrators of Tulane University. We shall refer to this in a later issue.

Dr. Nicholas Senn has just returned to Chicago from a trip in Africa, and says that cancer is almost unknown among natives.

Dr. William E. Parker, of Hot Springs, Ark., was recently operated on for appendicitis at the New Orleans Sanitarium, and returned to his home quite well.

Dr. E. Paxton has moved from Gloster, Miss., to Indianola.

Dr. G. M. Snellings, who has been Assistant House Surgeon at the Touro Infirmary for the past two years, has gone to Europe to study.

Dr. and Mrs. Joachim are spending the summer through Europe.

MARRIED.—Dr. Boote O. LeBlanc to Miss Daisy Carville, at St. Gabriel, La., June 12. Both of St. Gabriel.

DIED.—Dr. L. G. Perkins, age 79, at Norwood, La., August 7. He left one son, Dr. P. J. Perkins, of Simsport, La. The doctor at one time was superintendent of the Louisiana State Insane Asylum at Jackson.

Book Reviews and Notices.

All new publications sent to the JOURNAL will be appreciated and will invariably be promptly acknowledged under the heading of "Publications Received." While it will be the aim of the JOURNAL to review as many of the works received as possible, the editors will be guided by the space available and the merit of the respective publications. The acceptance of a book implies no obligation to review.

The Diseases of Society, by G. FRANK LYDSTON, M. D. J. B. Lippincott Co., Philadelphia and London.

This book is based upon the idea that there is a pathology of the social body as well as of the individual body. Crime, prostitution, pauperism, insanity in its sociologic relations, anarchy, political corruption, and adverse economic conditions, are all discussed as the most important phases of social disease. The philosophic, materialistic study of crime, as one of the newer phases of advancement in sociologic and medical science, is thoroughly undertaken.

The author refers to the negro as a prime factor in the criminality of America since the war, and to us, in this section, many of his conclusions will seem eminently wise and just. For instance: "If the dominant political parties had paid more attention to the industrial, moral and physical

training of the negroes, who were suddenly thrown upon their own resources after the war, and less to the harvesting of their votes, it would have been far better for the South. Few of the people of the North appreciate the terrible burden imposed upon the South by the liberation of the slaves. Slavery was a fearful wrong, but it was a national crime to throw the burden of an evil that was originally legalized, fostered, and taken advantage of by the entire country, upon the section to which it was finally confined."

In speaking of anarchy, our author names as the two most dangerous elements of "the privileged law-breakers of America," the capitalist and the trades-unionist, and in this line we cannot refrain from quoting an apt metaphor: "Our Legislators are playing the role of shuttlecock in a game in which the battledores are wielded respectively by labor's vote and capital's money. The public is paying a high tariff for watching the game from outside the fence."

Lydston calls attention to the fact that the criminal himself and his crimes have received the attention of society, but that the causes that produce the criminal have been too much ignored so far as any rational attempt to correct them is concerned; that as the moralist and the law-maker have failed on the whole, hope for the future seems to hinge upon the dominance of medical science in criminology and that the most effective means of prophylaxis are those tending to the prevention of degeneracy as it may be granted that degeneracy underlies all social disease.

He gives as the fundamental principle of the scientific criminologist the making a healthy man of the criminal or prospective criminal, giving him a sound brain to think with, clean blood to feed it upon, and an opportunity to earn an honest living.

The whole volume is highly interesting and well-written, full of thought, and would repay physician or layman for the reading.

C. C.

Consumption and Civilization, by JOHN B. HUBEN, M. D. J. B. Lippincott Company, Philadelphia and London.

The conception of this book is beautiful, and its execution has been carried out in an admirable fashion. Both the conception and the presentation of this fine work must surely afford to the hardest to please among book lovers that exquisite pleasure which culture brings to us. It is unfortunate that the reading public reads just for fun; it misses a great opportunity here, as in other instances, to derive from real good books all the benefit reading procures. In the author's own words the book is a comprehensive exposition of the effect which consumption has had upon civilization, and a consideration of its relation to human affairs. There are 131 interesting illustrations.

E. M. D.

The Surgical Treatment of Chronic Suppuration of the Middle Ear and Mastoid, by SEYMOUR OPPENHEIMER, M. D. P. Blakiston's Son & Co., Philadelphia.

This book represents the modern views on the surgery of the middle ear and the mastoid process. Beginning with a general consideration of surgical diseases of these parts, the author goes into minute details in the preparation of the patient, the conservative treatment of middle ear suppurations in all their phases, and the anatomical and surgical landmarks, and ends with a thorough review of all the operations practiced upon the ear and mastoid and the after treatment. In his treatment of this inter-

esting subject the author is clear and concise, and the text is made perfectly clear by a generous distribution of illustrations with figures, half-tone and key plates, appropriate to the subject matter. The volume is attractively gotten up by the publishers, and altogether is a desirable literary acquisition.

DE ROALDES & KING.

Diseases of the Nose, Throat and Ear, by SETH SCOTT BISHOP, M. D.
F. A. Davis Company, Chicago.

This book is the third edition of the work written by this author some years ago, and since the original appeared has been thoroughly revised, enlarged, and in parts condensed by the author. The book is especially designed for a text-book to supply in complete and condensed form what is needed for the student and general practitioner to acquire a practical knowledge of these branches. We commend the work as most excellent for that purpose.

DE R. & K.

Ophthalmic Neuro-Myology, by G. C. SAVAGE, M. D. Published by the author; printed by Keelin-Williams Printing Co., Nashville, Tenn.

This little book is a companion volume to the author's well-known *Ophthalmic Myology*. Neither is likely to prove attractive to the general practitioner, but he who devotes especial attention to the diseases and derangements of the eye will find in both much that is novel and interesting.

BRUNS.

The Ophthalmic Year-Book. A Digest of the Literature of Ophthalmology with Index of Publications for the Year 1903, by EDWARD JACKSON, A. M., M. D. Hewick Book and Stationery Co., Denver, Colorado.

When, as Dr. Jackson reports, the literature of ophthalmology grows by some 20,000 to 30,000 the value of such a digest prepared by so competent an authority is readily understood. These year-books are becoming necessary to all special workers who desire to keep abreast of the times.

BRUNS.

Biographic Clinics, Vol. III, by GEO. M. GOULD, M. D. P. Blakiston's Son & Co. Philadelphia, 1905.

Every physician will find these volumes of the *Biographic Clinics* interesting and suggestive. While we must consider Dr. Gould an extremist, we believe that like many extremists he has done great good; in this instance by persistently drawing the attention of medical men to the vanities of disorders which may follow in the train of uncorrected refractive defects and muscular unbalances, by stimulating those of his own specialty to greater care and thoroughness in the correction of such errors.

BRUNS.

Dental Surgery For Medical Practitioners And Students Of Medicine.
Fourth Edition. A. W. BARRETT, M. D. (Lond.), M. P. C. S. L. D.
S. E. P. Blakiston's Son & Co., Philadelphia.

This book contains much valuable information and will be found very useful for those for whom it is written. While not as complete as it might be; still it is a treatise which I can heartily recommend.

FRIEDRICHs.

The Diseases of Infancy and Childhood. For the use of students and practitioners of Medicine, by L. EMMETT HOLT, M. D., Sc. D., L. L. D. Third Edition. D. Appleton & Co., New York and London, 1906.

When the first edition of Dr. Holt's book appeared some years ago, a well-known practitioner stated that the author had labored for several years in the dead-house and brought forth a live book. The comment was prompted by the unusual space and detail allotted to the gross and minute pathology of children's diseases. This is still a characteristic feature of the book, but it may well be said that the strongest feature is the author's ability to present in a clear, concise manner, symptomatology and diagnosis. In this part of the work Dr. Holt easily excels for he is a careful observer, and has the faculty of presenting clinical pictures in a comprehensive manner. The former editions especially commended themselves to the practitioners and students for this reason. Another characteristic of Dr. Holt's works are the illustrations.

One unconsciously turns to the chapter on infant feeding and digestive disorders when reviewing a book on children's diseases. Dr. Holt has not modified to any great extent his views on this subject; not as much as one would expect, if there has been any real advance in the various suggestions on infant feeding that have appeared in the late literature. Since his work is based on clinical results he may not have found reason to change, but the busy physician usually expects to find the kernel of the latest investigations in text-books. This is not offered as a criticism, nor is it to be inferred that this part of the book is not up-to-date,* for the chapters on dysentery, diarrhea, and stenosis of the pylorus, illustrate how close the book is in touch with the work of the day. It is a matter for comment to see cretinism classed under the head of diseases of the nervous system.

The work deserves its great popularity in the part, it will continue to receive it for the same reason.

MILLER.

Clinical Obstetrics, by ROBERT JARDINE, M. D. Edin. M. R. C. S. Eng. F. F. P. & S. Glasgow, F. R. S. Edin. Second Edition. Rebman, Ltd., London and New York, 1905.

This work is essentially clinical, abounding in clinical histories, and presenting the results of Dr. Jardine's personal experiences at the Glasgow Maternity Hospital. It cannot be intended as a text-book, since it fails to cover the whole field of obstetrics, but is to be classed as a work of value to the advanced student, or practitioner, who will read it because it is concise and notably free from unnecessary references. Dr. Jardine relies upon clinical histories to illustrate his methods and particularly to show what cleanliness can accomplish in midwifery. Throughout the work the appeal is constantly made for antiseptic and aseptic methods in obstetrics. The book is dedicated to those who are assisting to accomplish, by cleanliness in obstetrics, what aseptic methods have succeeding in doing for surgery.

MILLER.

Surgical Diagnosis. A manual for students and practitioners, by ALBERT A. BERG, M. D. Lea Bros. & Co., New York and Philadelphia, 1905.

This is a hand-book of approximately 550 pages, containing 215 engravings and 21 plates in which the author has endeavored to present surgical diagnosis in a clear and definite way to meet the needs of students and

practioners. While such a work is necessarily clinical in its various features, there is throughout the text a constant effort to portray the pathological changes and link them with the cause, onset, and course of the diseases. Special attention is paid to the recognition of surgical affections of the internal organs and to the various mechanical devices that are necessary in such investigations. The arrangement of the book is quite convenient. The publishers have presented it in their usual excellent style, and no doubt it will receive due consideration from the profession.

MILLER.

A Text-Book on the Practice of Gynecology, by WILLIAM EASTERLY ASHTON, M. D. L. L. D. W. B. Saunders & Co., Philadelphia.

Dr. Ashton's book seems to be as exhaustive in detail as it is possible to make a text-book. In fact, if any criticism can be offered it would be that in the effort to cover the whole field of women's diseases it has been necessary to introduce illustrations and descriptive matter which add to the bulk rather than to the practical value of the work. The minuted detail is given to operative technic and after treatment. The chapters on X-Rays in Gynecology, The Blood in Relation to Surgery, and Microscopic and Bacterologic Examinations, contain the latest methods and results, and may be considered as some of the features of the book. It is of interest to learn that Dr. Ashton still advises ventro-suspension for prolapse of the uterus, also in most of the retro-displacements, particularly in the light of the frequent failures of the operation and the more satisfactory results obtained by later methods. His ideas on ante-flexions of the uterus are also at variance with the opinion held by many of our best authorities. A careful reading of the book will supply many new ideas to the specialist, and to the busy practitioner it can be recommended as a useful reference.

MILLER.

The Health-Cure of the Baby, by LOUIS FISCHER, M. D. Funk & Wagnalls Co., New York and London.

No better book has ever been presented for the daily suggestion to nurse or mother in the care of babies. All points of practical need are covered, and they are enough warnings and "donts" to be worth while.

DYER.

Eczema. A Consideration of Its Course, Etc., Etc., by SAMUEL HORTON BROWN, M. D. P. Blakiston's Son & Co., Philadelphia, 1906.

In about 100 pages a multitude of prescriptions and suggestions are given in the Care of Eczema. The book is practical.

MORTUARY REPORT OF NEW ORLEANS.

(Computed from the Monthly Report of the Board of Health of the City of New Orleans.)
FOR JULY, 1906.

CAUSE.	White.	Colored.	Total.
Typhoid Fever.....	13	7	20
Intermittent Fever (Malarial Cachexia)	2	2	4
Smallpox.....		1	1
Measles			
Scarlet Fever.....			
Whooping Cough.....	2		2
Diphtheria and Croup.....	1		1
Influenza			
Cholera Nostras.....		1	1
Pyemia and Septicemia			
Tuberculosis.....	42	42	84
Cancer.....	13	6	19
Rheumatism and Gout	3		3
Diabetes			
Alcoholism	4	1	5
Encephalitis and Meningitis.....	11	4	15
Locomotor Ataxia.....			
Congestion, Hemorrhage and Softening of Brain.....	12	12	24
Paralysis	1	2	3
Convulsions of Infants	4	1	5
Other Diseases of Infancy	15	7	22
Tetanus	1	3	4
Other Nervous Diseases	1		1
Heart Diseases	37	32	69
Bronchitis		5	5
Pneumonia and Broncho-Pneumonia.....	11	11	22
Other Respiratory Diseases.....			
Ulcer of Stomach.....	2	1	3
Other Diseases of the Stomach	3		3
Diarrhea, Dysentery and Enteritis.....	40	16	56
Hernia, Intestinal Obstruction.....	2		2
Cirrhosis of Liver.....	8	2	10
Other Diseases of the Liver	2	1	3
Simple Peritonitis		2	2
Appendicitis.....	3	2	5
Bright's Disease	26	22	48
Other Genito-Urinary Diseases.....	4	3	7
Puerperal Diseases	5	1	6
Senile Debility.....	12	7	19
Suicide	6	1	7
Injuries.....	20	14	34
All Other Causes.....	17	11	28
TOTAL.....	323	220	543

Still-born Children—White, 16; colored, 26; total, 42.

Population of City (estimated)—White, 245,000; colored, 88,000; total, 333,000.

Death Rate per 1000 per annum for Month—White, 15.82; colored, 30.00; total, 19.56.

METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmospheric pressure 29.97
Mean temperature 82.
Total precipitation 7.32 inches.
Prevailing direction of wind, southwest.

New Orleans Medical and Surgical Journal.

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No. 4

Original Articles.

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. A complimentary edition of one hundred reprints of his article will be furnished each contributor should he so desire. Covers for same, or any number of reprints, may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

Confusion Between The Terms "Contagion" and "Infection," or The Mosquito Craze.

By O. FAGET, M. D., New Orleans.

"A voice crying in the wilderness....."

"If the multitude has intimidated me....."

".....if I have feared the scorn of my fellows," etc.

(*Job, C. 13.*)

"Nothing can resist the authority of facts, and the good sense of the public is often in advance of the hesitations and sophisms of interest and science." (Pariset translated by Carpenter. Consult his "Sketches from the History of Yellow Fever, 1844.")

The people unbiased in their observations have said: "It is in the air," and have ridiculed the fumigation and refumigation and the screening as they did, in 1897, the house-quarantine under which it chafed. What the people mean by the expression "it is in the air," is that the mode of extension of yellow fever is not by con-

tagion, as with smallpox, and that all means so far employed to control yellow fever, means so efficacious for contagious diseases, have proven vain, cruel, unwarranted and they have protested against the continuance of such measures in face of evident failure and have had no other recourse but that of concealment.

The promoters of the theory of the transmission of yellow fever by the msoquito (and by the stegomyia only, at that), have assumed the voice of authority as did Mohammed. They say: It is a fact, a dogma—the truth!!!

With the authority of all past observers, I will state: this pretended fact is an error of observation, because, if true, it would contradict the well-established fact of the non-contagiousness of yellow fever. The facts and arguments which prove the non-contagiousness of yellow fever prove its non-transmissibility by the mosquito or by any other means.

I do not pretend to show the weak point in the facts establishing the mosquito theory, but will throw out some general hints.

1st. Commissions sent for a purpose have a tendency to find what they are sent to seek and follow the beaten way. We remember a commission which confirmed with authority the Sanarelli germ, as the too-often-found cause of yellow fever. Sanarelli based his claim on the results obtained on dogs by the injection of his germ; results very similar to those of yellow fever; ignoring apparently that putrefactive germs injected into dogs have caused similar results. Were the cases experimented upon real cases of yellow fever, or were they cases of ptomain poisoning, such as the Sanarelli cases? But I do not lay stress on this.

2nd. The places selected to conduct the experiments were not properly selected; in the immediate neighborhoods of Havana, of Vera Cruz and of Rio Janeiro, where, at the time, yellow fever prevailed. It is possible that these immediate neighborhoods might have been foci of yellow fever; the fact being ignored by the experimenters, all the native population being immune. Similar experiments carried on an infected ship, the crew and observers being immune, would show similar results, which might be attributed to the most excentric causes, the fact of the ship being infected being ignored; that is, the real cause of the result. "*Causa pro causa*" * * * a coincidence.

Dr. Valli, wishing to prove that yellow fever was contagious, swallowed, in the hospital at Havana, a pill made of black vomit, and died of yellow fever. Was it from the pill, or was it from the infection of the place he was experimenting in? Such experiments with the excreta of the sick or their blood by inoculation have always failed outside of an infected focus.

The present mosquito theorists admit that yellow fever is not contagious through contact with the sick or their excreta (fomites), provided there be no communication between the sick and the well through the stegomyia, and they claim this immunity as a new fact, ascribing it to the mosquito bar.

Do they really ignore that this fact of the immunity to yellow fever contagion (outside of the infected area) was known at all times and all places, where yellow fever prevailed—mosquito bar or no mosquito bar?

Laroche, of Philadelphia, and all the past observers of New York, Charleston, New Orleans and of Europe, have ascertained and given these facts. In 1897, we have the testimony of the Touro Hospital and the Beauregard Isolation Hospital, where no precautions against the mosquitoes were taken. In our Charity Hospital, during the localized epidemics of 1870, 1872, 1873, 1875 (the writer was then an interne), hundreds of cases were sent from the infected foci in all stages of the disease; the non-immune residents of the hospital were numerous, Dr. A. B. Miles among others; no precaution whatever was taken. Who knows of any having contracted the disease then? But in 1878, the epidemic area having reached the site of the hospital, all those susceptible, Dr. Miles, students, sisters, etc., were taken sick as they would have been in any other establishment; as the neighbors of the hospital were being taken. And these residents of the hospital had been exposed to the daily contact with the sick; performing autopsies, etc., since the very beginning of this epidemic and through *several* of the preceding ones.

Were there no stegomyias in the hospital during the previous epidemics, or do they go hand-in-hand with the spread of the infection, having an understanding with the cause, invading the hospital, long filled with patients, only when its site has been invaded and has come within the extending area of infection, and not

at all during the whole course of an epidemic, when not so included in the area of infection; and this, not in one instance, but in innumerable epidemics.

How often a physician, a priest, a planter has visited an infected district; has returned to his home in a non-infected district and has developed a case of the fever? An apparent case of contagion; but was it from the place he visited or from the person of the sick? Now, will his surroundings contract the fever from his case? Not at all. You can prophesy from past experience that they will not. I remember doing so in a physician's family and in a religious community. In the latter, five had the fever contracted by visiting infected localities. Their neighborhood was not infected. They were attended and visited by numerous non-immunes. No precautions whatever against contagion, which was the prevailing opinion at the time, were advised. There was no thought at the time of mosquitoes, which were quite prevalent. The only warning given was to watch if any cases developed in their neighborhood, among children and those who stay at home; that, in that case, they might expect cases among those who stayed at the house. It would show that the district was infected. It did not receive the infection, and none of the numerous susceptible inmates of the house took the disease, although mosquitoes had free communication between the sick and the well, as in the hospitals and other houses of the city in the same circumstances; instances too numerous to mention.

These are facts, known to every observer, which disprove the theory of the mosquito transmission of the disease.

In New Orleans, in 1863, and in 1864, September and October, during the occupation by the Federal troops, there was an epidemic of yellow fever *only* on the gunboats lying at anchor in the middle of the river. These gunboats had been in communication with Key West, where yellow fever prevailed at the time. The army quarantine officer at the port of New Orleans had no authority over the navy at the time. A great number of cases were transferred to the naval hospital (St. James Hospital), many officers were treated in private residences. (An officer from the "Virginia" was treated by my father on Bourbon street.) Some visitors to the ship developed the disease in the city, where they

were treated by Dr. Holliday; some were treated in the Charity Hospital. These lay gentlemen and officers treated in the city from the first day of sickness were daily visited by numerous susceptible friends from the army and navy. Not only was there no epidemic in the city, then full of non-immune soldiers, but not a case developed from the contact of the sick, outside of those who visited the ships. Were there infected mosquitoes only on the fleet, and none susceptible to infection in the city at the time?

The evasion of an epidemic in '63 and '64 in New Orleans, which was extraordinary, must be ascribed to the fact that the infected ships lay at anchor at a distance from the shore (loss of contiguity) and to the fact that very few inclosed effects, if any, were conveyed with the patients into the city.

In 1823, at Port du Passage, on the north coast of Spain, an infected ship, the *Dona Stiera*, carried the infection; but none of those having contracted the disease on board or in the limited infected area near the ship, and treated elsewhere, conveyed the disease to others in a single instance (Audouard and others.)

Dr. Warren Stone related that in 1839, 300 cases of yellow fever were received from Texas at his hospital. No cases developed from these at the hospital or outside.

Cadiz received in her hospitals 500 cases from the fleet of Admiral Gravina. No cases were contracted from these in the city. The infected mosquitoes must have remained aboard the fleet. Were there no stegomyias that year in Cadiz, and were they present during the five epidemics which she suffered from 1800 to 1819? (From Pariset, writing about epidemic of 1819.)

We will now cite the case of the *Anne-Marie*, (Report of Melier to the French Government on the epidemic at St. Nazaire) which left Havana with a cargo of sugar in sacks. She had a few cases of the fever at sea as she left. No sickness for more than a month, when she reached St. Nazaire. She lay at the quay. The crew was discharged, all well. The hatches were opened. Everyone working in the ship took sick and were treated in the city. No one contracted the disease from these cases, outside of the ship, with two exceptions; a second-hand dealer, a woman, who had received clothes from the healthy sailors and a country physician who *had not* visited St. Nazaire, and who died with black vomit,

having attended in the country, at Montoir, one of the laborers who had left the *Anne-Marie*. This laborer leaving the ship for the country, several leagues distant, must have carried with him a bundle of clothes from the infected ship. He sickened at his home; his family had a light form of the fever and the doctor attending him may have contracted the disease, not from the patient, but from the infection or morbid cause carried in the bundle and infecting that isolated home in the country, an instance of importation (the only one in this epidemic) with which we are quite familiar. Melier holds this case as a certain proof of contagion; the *only* one in this epidemic.

The mosquito theorist must hold that the infected mosquitoes religiously kept aboard, except perhaps the one or two who were carried away to the country in the bundle of the laborer to infect his family and the visiting physician * * * It seems mosquitoes need to be carried in bundles or trunks! * * *

There were apparently no other stegomyias in St. Nazaire to convey the sickness from the numerous sick to the well, except on board and in the country home of the laborer from the ship.

The next case is that of the localized epidemic in Madrid in 1878, reported for the French Government by Brouardel (late dean of the Paris Medical Faculty). He traced the first cases to persons long resident in the block, which was the only one affected. These cases were in the immediate neighborhood of two Spanish soldiers who had arrived from Havana with their trunks. These soldiers had not been sick, being long time immune from yellow fever. This only block, thickly populated, was thoroughly infected. Those who contracted the disease by visiting it and were treated elsewhere did not spread the disease. Did the infected mosquitoes from Havana keep dormant in the soldiers' trunks to awake on arrival at Madrid and sting all those affected in this block, or were there other stegomyias to take up the infection from one to the other in the block, and never a one to cross the street on either side to spread the disease, and were there no such mosquitoes in the hospitals or elsewhere when patients were treated, to do the same? This is rather far-fetched!

We will cite the case of the *Plymouth*, the American man-of-war, which, having had yellow fever on board in 1878, was ex-

posed to a severe winter in Boston and started in the spring of 1879, with a new crew, and reaching the warm waters by the Bermudas, developed a new epidemic among the crew which was arrested by a quick return to the cold regions. Were there enough infected mosquitoes left over from the last year's epidemic to outlive the Boston winter and cause the new cases on the wind-swept decks? Is it not more probable that the cause of the infection was kept alive in the proximity of the fires which were kept up during that winter, as Dr. Murray, M. H. S., informed me. I hold that this cause keeps to surfaces along which it spreads and cannot be so easily swept at sea as mosquitoes. But of this, later * * * (If the cause of yellow fever was suspended in the air, it would be scattered in all directions by the winds, and cases would occur at a distance from the focus; which is not the case.)

We recall the case of a lugger near Gibraltar, exchanging produce at sea with an infected ship, taking from the ship biscuits and cheese and carrying the disease to the village to which it belonged. Were the infected mosquitoes in the sacks of biscuits, or did they pass from the deck of the ship to that of the lugger * * * in the open sea?

Is not this the explanation of our late epidemics since 1878? The exchange by smugglers at Ship Island of land produce from the luggers for ship supplies from the infected ships. I remember two epidemics (one in 1886) at Biloxi which she had alone; one at Ocean Springs, in 1897; and this last one of 1905, most probably came from Gulfport, which was suspected long before New Orleans. Evidently the Ship Island Quarantine Station is too near this coast—so dangerous to New Orleans. One of the mouths of the Mississippi River could be better guarded.

We will cite also the case of the infection at Leesville, on lower Bayou Lafourche, La., reported by Dr. Marcour, in our last epidemic. The first cases were Camille Ribstock's ten children. The fever spread to all the fishermen's huts along the bayou. Camille Ribstock visited New Orleans in June, 1905, in his lugger loaded with shrimp, took his supplies from the groceries near the luggers' landing, a locality which was at the time infected. Ribstock did not contract the disease, being an immune of 1878. The first cases at Leesville were his children, who had not left Leesville.

Is not this the explanation of so many fishers' camps being infected in lower Louisiana? They all took their supplies about the luggers' landing, the first focus in New Orleans. (Another initial focus was about Chippewa and Josephine.)

It is preposterous to say that in all these cases, so widely apart, the infected mosquitoes were carried in sacks and barrels of provisions.

So, the cause of yellow fever can be carried outside of a case of fever, by immunes, in bales of produce, in sacks, trunks and bundles.

Is this not the knot of the question, the explanation of the more than century-long controversy between the contagionists and the non-contagionists?

Pariset asks why certain epidemics have a contagious character and why others have not; why it is contagious in Europe and not in America.

We must not lose sight of the fact that the contagionist held that the transportation of the disease from one place to another proved contagion; they ascribed the origin of an infection to the person of the sick instead of ascribing it to his trunk.

Dr. Dickson said that he believed yellow fever to be transmissible or communicable from one city to another, provided the general circumstances are analogous. He added: "Of its contagiousness using the word in its limited sense, its propagation from one subject to another, I have never witnessed any example."

Dr. J. C. Faget, although he did not believe in the contagiousness of yellow fever, believed in its importation. He said: "It is evident that the transmission of the air of a city infected with yellow fever is possible, in boxes, in bales of merchandise, and especially by the boats going up the river to Baton Rouge, Natchez and so forth; as the epidemics of the interior towns of Spain were imported from Cadiz, Malaga, Barcelona and other ports. * * *

"A complaint, contagious only under certain circumstances, is not contagious at all." * * * "If yellow fever is contagious," says Dr. Barton, "it is a law of the disease. This it must carry into all places and under all circumstances, like smallpox." * * * In hospitals and homes outside of the infected area as well as within the focus; neither can it be held that the mosquitoes are only present *within* the focus to disseminate the disease and are

absent *out* of this focus where patients, in whatever number, have been transferred.

"In the case of the '*Eclair*,' while those who went on board took the disease with almost unerring certainty, it remains yet to be proved that those affected communicated the infection on shore"

* * * As in the case of the *Anne-Marie* at St. Nazaire, Dr. Wilson remarks: "Nearly every man who joins a ship in such a condition has the prevailing disease sooner or later; but no number of persons taken from such a ship, laboring under the disease in any stage, or in any force, and placed in a situation where the disease does not exist, though in a mass of healthy people, can excite it in a single instance."

It were futile to say that it possessed those contagious properties in the ship, but lost them the instant its subjects were removed a hundred yards from its source.

This is the reason of my disbelief in the mosquito transmission theory. Why should mosquitoes transmit the disease in infected localities, or on infected ships, and not hospitals, homes, etc., when outside the infected area? Are the mosquitoes absent from these places to convey the disease? This is preposterous.

How, then, is the infection conveyed from one place to another? We have seen that it can be conveyed through immunes, not sick themselves, evidently outside of their bodies; then it must be with what they brought with them, their trunks, carrying the air, the conditions of the infected locality where these were closed.

This explains so many cases where the origin of the fever cannot be traced to any sick person having come from an infected place.

When it is traced to a person lately arrived from an infected place, who is the first to be sick and a number of persons take sick in his immediate neighborhood, these cases are ascribed to the first, naturally. This first case falls under the senses, as it would be, were it a case of small-pox.

In the case of smallpox, it would be ridiculous to point to the trunk as the conveyor of the disease; because it is a well known fact that the emanations of the sick, a small-pox scab, for instance, is a sufficient explanation of the spread of the disease. His trunk might also convey the disease by fomites, but certainly it is secondary to the evident cause emanating from the sick.

But, what is the explanation of the difference observed in yellow fever, as also in cholera and plague; not contagious from one case or any aggregation of cases transferred from the infected locality to the hospitals or elsewhere, and apparently contagious when transferred to a distant place as from New Orleans to Shreveport or Memphis? I will answer: in one case he goes to Shreveport or a distant place with his trunk; in the other, not. Of course, trunks and furniture moved from a focus to another part of a city might create a new focus.

Patients sent to the hospital from an infected place do not carry the infection with them, because their clothes are sufficiently aired; neither the doctor nor anyone else. The enemy is in inclosed, un-aired articles. The trunk, or box, which carries the infection might have been closed in the house of immunes, in the infected district, at a distance from any sick, not contaminated by the sick; it might be accompanied or not by persons, be they immune or not. Necessarily, these persons being sick or convalescent, or in the incubative stage, would indicate that they had come from an infected place. Their cases would be the indication, the precious indication, the label, as it were, that their trunk contained the same air—that of the infected locality—by which and in which they themselves had been affected.

It has been said: “the ship is sick.” It can be said: the trunk is sick; treat it. The danger lies in enclosed articles from an infected place, containing the air—the conditions of spread of that place; not in persons in whatever stage of disease; not even in their dead bodies, as is proven in non-infected hospitals. An empty coffin closed in an infected locality would be more dangerous.

Not every trunk from an infected locality will convey the disease, but one is sufficient and from it as from an infected ship, or a sealed house or a sealed quarter of an infected city, if transported into a healthy city, the cause of disease will spread, according to its laws.

Not every brand from a fire will cause a new conflagration, but one may do it, and neither will persons affected by the fire convey their burns to their neighbors in the hospital; but those visiting the site of the fire may be affected in the same manner.

Why not restrict the word “infection,” so loosely applied to this particular mode of spread of such diseases as yellow fever, plague

and Asiatic cholera, which is so different from the mode of spread of contagious diseases?

In 1873, a great number of cases of Asiatic cholera were sent to the Charity Hospital of New Orleans from an infected district and not a solitary case of contagion took place among the numerous attendants and neighbors; all non-immunes. No precautions whatever were taken and autopsies were performed.

Allow me a definition of "infection," a mode of spread of diseases, as opposed to contagion, not from person to person, but from place to place, through contiguity of surfaces; or from one locality to another, through and by enclosed objects (not necessarily infected by contact with the sick or fomites, but) carrying the air, the infected conditions of the locality whence they are derived; in other words, the cause of the disease.

So far, we have no means of ascertaining the infection of a place or of objects. The only evidence of infection we possess is a well diagnosed case and the development of new cases. Let us not take the effect for the cause and conclude that the case which we see is the cause of the infection of the locality or of the development of new cases as with small-pox. It is the reverse. The infection of the locality or of objects is the cause of the cases.

As a case of yellow fever is not contagious when transported outside of the infected area, say to the hospitals; neither is it contagious within the infected area. It is a law of the disease.

In the case of a contagious disease, the germ or cause of the disease uses the human organism as a culture ground for dissemination (a small-pox scab, for instance); in infection, the cause of spread is outside the human organism; although it affects it, it does not make use of it. It has a power of self-propagation outside the human organism.

A comparison in the visible world to those who use indifferently the term contagious or infectious as convertible terms: (*c'est bonnet blanc ——— blanc bonnet.*)

Would you sleep indifferently in the same bed with a case of itch as with a person all swollen by the stings of bees or mosquitoes? In the first case you would catch the disease, the itch; because the acarus lives and propagates in the skin; in the other, not; because bees or mosquitoes affect the skin, but do not live upon

it. Suppose you went to the help of a person among the bee-hives, were they invisible, you might be affected by the same cause, but *not from the affection of the person*. Now, a bee-hive might be transported to a distant place and affect in the same manner those in the latter place. Thus, is the yellow fever cause transported unknowingly, being invisible, in trunks and packages, to other places which it infects and its power of propagation is certainly more rapid than that of bees or of any contagious disease; something like the spread of the *protococcus nivatica*, which, starting from a patch on the snows of Washington State, invade immense areas in an incredible short time. This microbe causes the snow to assume a pinkish hue; thus its spread can be seen by the naked eye.

We must not suppose, because we have seen that yellow fever does not spread in hospitals (outside of the infected district) from any aggregation of patients, in whatever stage, that it might be due to a less degree of contagiousness than—say small-pox. “Its spread through a city is, especially in grave epidemics, tenfold more rapid than that of smallpox. In the space of a month, yellow fever has often pervaded an entire community, which by the unassisted action of contagion, smallpox would not overrun in a year. Though sometimes the epidemic progression of the disease is slow, in other instances the spread is very rapid (from house to house, from block to block—a little slow to cross over a street, as at Canton, Miss., in 1878—as a spot of oil, a fire, an army with serried ranks) too much so, indeed, to be ascribed to personal communication, direct or indirect.” * * * (Laroche.)

I have studied a localized epidemic in the country, about five miles from Vicksburg, in 1878. It started from Cushman’s house, on the top of a hill, and *radiated* from that place as a prairie fire, *over fields*, invading every house, each one in its turn; none escaping within the area of a mile and about 300 to 600 feet apart from one another; *in spite of* the closest seclusion practiced by the panic-stricken inhabitants. It was the true shotgun quarantine. I could not have visited any place unless called upon to attend the sick. The inmates of a house or negro cabin were taken all at the same time, by tens, some on the floor—sometimes five in the same bed. I could have announced the next house to be invaded. Outside of this area, which was perfectly circumscribed, as with a line, not a

case of sickness. I saw but one case of a clear intermittent fever, far away from this focus. I was the only physician in that direction, visiting it daily from the City Hospital, of which I had sole charge, at the time when the epidemic in the city had spent itself. When everyone had been immunized in that country district, a man and his wife returning to live in it, were taken with the fever, showing that the infection was still present. So, I was well acquainted with the facts. (The Cushman case in my thesis in Paris, in 1880.)

The cause of infection, we surmise, is a living germ, because we know nothing but life to multiply indefinitely; but it does not follow, because certain microbes make use of the human system for their propagation as in contagious diseases, that all microbes do the same; however invisible both may be. Now the facts prove that it is otherwise; as it is with the itch-bug and the bee which we see; that certain diseases as yellow fever, the plague, cholera are not contagious but eminently infectious.

The source of contagion is in the person of the sick; the source of infection is in a locality or in objects proceeding from it.

This infection is caused by living germs or microbes which multiply outside the human body, and which affect it, either by the toxin only, which it has absorbed as the venoms of a snake, or again, it is possible that the microbe being absorbed develops its toxin during the period of incubation and is afterwards destroyed.

But however it be, the patient not communicating his disease at whatever stage or by whatever means (mosquitoes or inoculation); it is evident that the first cause of his disease, the microbe, is no more present, visible or capable to usher from his system so as to cause the same disease in another subject.

This is the reason I have been so far very skeptical about the numerous claims of the discovery of the cause of yellow fever (in the blood of patients. "*Errare humanum est. Ars longa; vita brevis; occasio præceps; experimentum periculosum; judicium difficile; vanitas incommensurabilis ——— et ——— Stultitia.*" (This mosquito theory rests on a reed!)

All great men have been sometimes in error. Laroche, too much impressed with certain analogies between yellow fever and malarial fevers, such as their prevalence in the same season, their decline

and cessation at the advent of cold, even in the warm rooms of the sick, the non-contagiousness of both, restricted to the term infection, for the needs of his cause, to the operation of morbid agencies of a *local* or domestic *origin*, as in the case of malaria or filthy localities, as jails, hospitals and ships. He writes that, admitting the importation of yellow fever from one place to another had been proved beyond doubt, this importation (a point at issue with him) does not necessarily involve the question of contagion. He says (p. 345), "For my part I can but believe that if a disease has been found by almost everybody, in every place and at all times, to be incommunicable out of infected districts, and very few instances of a contrary kind are adduced, *some error* must have crept into the explanation of the origin of the latter; *something has been omitted or overlooked.*"

This cause of error might be manifold; ignoring the presence of infection in a place, and explaining a given case by any eccentric cause, or ascribing the origin of infection in a place to the person of the sick, as with small-pox, instead of looking to what he carried with him, his trunk or provisions as the conveyor of the infection. (Consult Dr. J. C. Faget, Dickson, Hume, *Charleston Medical Journal*, in 1854, etc.) An epidemic of Lisbon and others, I believe at Cadiz, started from the Customhouses, where the trunks were first opened. In New Orleans we never saw so many foci start together as in 1897, due to the stampede from Ocean Springs, on the 6th of September. All these trunks closed at Ocean Springs where existed the conditions which caused the disease, and opened in different parts of New Orleans were so many little sealed Ocean Springs conveying the same conditions of spread as in the latter place; whether accompanied by immunes or by susceptible persons. Last year, 1905, before the presence of yellow fever was admitted, I knew, by reading the mortuary reports in the papers, that there were several foci in New Orleans, which made the suspicion strong that we had received the infection from a place close at hand, and from several independent conveyances. The first intended rumor I heard was that "there was much fever at Gulfport." The subsequent denials of Surgeon Wasdin M. H. S., did not amount to much to dispel the suspicion. When he investigated Gulfport there must have been few non-

immunes left. He failed to recognize the fever there and elsewhere, and gave it the name of "dengue" and "estivo-autumnal" fever. His diagnostic acumen must have failed him since 1897, when he had the honor to force the recognition of yellow fever at Ocean Springs. This is only to show that a national officer is just as liable to error as a State official.

My father, Dr. J. C. Faget, who connected his name with the law of the slowing of the pulse rate in yellow fever, too much impressed with the traditional fact of the immunity of the natives of New Orleans from yellow fever, certainly failed to recognize yellow fever in many cases of children, and called these cases "catarrhal," "hemorrhagic malarial" fevers, etc. He explained this privileged native immunity by a previous first attack in the earliest infancy, but claimed that this attack was so light as almost always to escape attention and proper diagnosis. Before the war, up to 1858, New Orleans was almost yearly visited by yellow fever, and the children became immune in their first or second year of life (as in Charleston, Havana, Vera Cruz, etc.). The few deaths among them escaped diagnosis and were ascribed to congestion of the brain or congestive pernicious fever. But in 1867, nine years had elapsed since any epidemic on account of the *blocus*, and the number of native children affected with yellow fever was consequently much greater, and a discussion arose as to the diagnosis. My father was on the wrong side, but I believe I converted him with the following argument, in 1878: The epidemic of 1878 started in the upper district of New Orleans. The papers gave a daily report of names and addresses of new cases and deaths. The lower districts were entirely free of any fever. The daily reports showed that children, native born, were taken sick in the same houses, on the same dates as the foreigners, and died in the same way and time. Could it be held for a moment that two different diseases, one whose specific cause had been imported, and the other, whose cause was local (paludal), would as it were, give one another the word and visit, hand in hand (*pari passu*), the same houses in the same district, have the same gross general effect on the patients, and be two different diseases, one taking the children, the other the adults? Untenable * * * This is the argument of epidemic coincidence which will apply to dengue, estivo-autumnal fe-

ver, and typhoid of short type during the prevalence of yellow fever. It applies also, as I have said before, speaking against the mosquito theory, to the necessity of an intelligent co-operation between two factors; the mosquito *stegomyia* on the one hand, and the presence of the yellow fever germ in a patient on the other—useless each without the other—to produce another case; and this, only in the infected district. But outside of the focus it must be held that the immunity to others from any patient, or aggregation of patients, is due to the absence of *stegomyias*. Then, these *stegomyias* must keep in the infected district and march *“pari passu”* with the spread of the disease. It must have an understanding with it. Untenable. The mosquito is superfluous, overreaching. What has he to do with the spread or conveyance of the disease?

This theory denies contagion, but admits it with the proviso of the only *stegomyia*. Were there *stegomyias* at the altitude of Quito in 1854, when it suffered a severe epidemic; or in Quebec, 47° lat. N., in 1864; or in the island of Ascension, a volcanic rock in the Atlantic Ocean? Was Dr. C. Finlay, in Havana, using the *stegomyia* in his successful (?) experiments or another kind of mosquito? The country house of the Jesuits he was experimenting upon was in the immediate neighborhood of Havana. This reminds me of the celebrated pathetic case of supposed contagion from a lock of hair of a deceased relative received and kissed in a country home far distant. It was ascertained subsequently that this country place had previously received the infection and that cases had occurred previously in the immediate vicinity of that family. *Causa pro causa*. Had the lock of hair never been received, etc.

A case was reported in New Orleans, in 1897, of a nurse contracting the fever from a doctor she was attending. She might have contracted the disease in another place; besides, the doctor's place might have been a focus and the fact ignored by the observers. The foci were numerous, and the practice of concealment so general, for fear of the house guard and fumigations.

From reported cases the percentage of deaths was about 30; in fact, it was less than half of one per cent, or one death to 200 cases. Last year the percentage was a little higher, but concealment was also practiced on a large scale, and most of the people had been immunized seven years before.

It is easy to claim great success for the means employed by comparing a mild epidemic with a grave one. In 1897 the sanitary authorities claimed to have accomplished as much with the house quarantine as did in 1905, those employing the screens and fumigations, by comparing figures with those of 1878. The same procedure took place at Cadiz, when the epidemic was mild. History repeats itself. The same unsuccessful results followed the fumigation and refumigations as practiced in 1905 this time directed against the possibly infected mosquitoes. I challenge the pretended claim of success as 93.7 in 1897. The rule is epidemics end about the 1st of November, frost or no frost. This last, of 1905, lasted 10 days more than that of 1897. In light epidemics a greater proportion of susceptible persons escape the disease altogether. In 1836 there was such a light form of the disease in New Orleans that every doctor thought he had found the best treatment, however different the one from the other.

In view of the inevitable competition between seaports in the States (they are not independent islands, land quarantine is altogether another proposition than marine), it is evident that to obtain the necessary uniformity, efficiency and permanency of quarantine measures, these should be under the ONE control. But if an error, such as the mosquito theory, is accepted, and measures based upon it are applied by the head of the National Sanitary Bureau, with all the force of discipline he wields, the consequences might be so much more serious on account of the permanency of his position, even in the face of repeated failures and protests, and of the greater force and authority of the Government at his back.

Convinced of the mosquito theory, provided mosquitoes are excluded, he might allow the transportation of trunks from an infected place to another without disinfection, as so far successfully practiced at our Mississippi Quarantine Station, and we would have a succession of epidemics as formerly. Besides, during an epidemic, we would be again exposed to the harassing practice of fumigations and refumigations, very dangerous to patients and convalescents, as I have had occasion to observe, to the forcible screening of patients and their forcible transfer to screened and over-crowded hospitals, where their lives are put in jeopardy by

breathing over and over again the same vitiated air. Such practices remind one of the bear who, wishing to deliver his sleeping master of an obnoxious "mosquito," crushed his head with a huge rock.

Beware of riots, as took place in India against similar methods applied to the stamping out of the plague. The East Indians are most mild, but love their families.

These practices, under which the people chafe, bring in their train concealment on a large scale; hence, suspicion of neighbors and exaggerated quarantines; evasions, and direful manifold results; hence, more concealment, more suspicion, more quarantine—a vicious circle. Human nature is always the same.

There was a notable exception in 1882, Dr. Joseph Jones being then President of the Louisiana Board of Health, and the results justified the procedure. Perfect sincerity and confidence were exercised. No quarantine was placed against New Orleans. I refer to the case of John Forbes, a sailor who reached New Orleans eight days from Havana, on June 18. His case developed June 22, corner Enghien and the Levee, where a ship from Colon was wharfed and her ballast had been discharged 2 days before, (10 days incubation if from Havana, 2 days if from ballast.) About fifty other cases developed in one focus, extending several blocks; many were treated at the hospital. This incipient epidemic was stamped out by thorough disinfection of all surfaces or through some unknown atmospheric change. The fact is, mosquitoes were then abundant as ever. (My father and myself took an active part in this instance of sincerity.)

If a case be found, say in New Orleans, or in Mobile or Galveston, the whole city is suspected of being infected, and is put in quarantine. We would act towards Mobile as she would towards us. This is certainly unwarranted, vain and cruel. The only way to avoid this is to re-establish full confidence by inviting reciprocal and an untrammelled investigation between the interested parties. A glance at the dead body of a yellow fever case, with the history of the case, is sufficient to an expert, whatever might have been given diagnosis. At least, the first death might be known; the focus ascertained with its *limits* (a block further might be included as a precaution), and this district *alone* need

be quarantined. The blocks might be flagged in order to apprise the people that a danger is incurred in visiting, not only the houses with patients, but even the houses of the well—of immunes for instance—in the infected area. This area should be corralled by a cordon of guards, *not* to quarantine any *person*, but only to prevent the removal of articles (trunks, closed packages, furniture, merchandise generally, and particularly groceries, which might be a very appropriate conveyor of germs), from this focus to any other locality in the same city, or to any other place, unless through a certainly efficient disinfecting plant—a sufficient degree of heat, or through a cold storage plant for the particular cause of yellow fever which does not resist cold. If a box car should be within the infected area it should not be closed and sealed and allowed to proceed to another place without disinfection; not more than a ship.

The people should be advised, even urged, to depopulate the focus for their own safety, through a camp of observation, as that conducted at Camp Perry, Fla., or at Brunswick, Ga., by the Marine Hospital Service. Not that I believe they could carry infection by being taken sick in the midst of other healthy communities, their effects being disinfected but to avoid the alarm which might follow from their possible cases in the present uncertain state of mind of the people on the subject. But, wherever invited and welcomed, and in the case of immunes, I would advise no detention or restriction, *provided* their trunks and effects were thoroughly disinfected. At Camp Perry these measures were perfectly effective. Among the 1211 refugees from Jacksonville who passed through the camp to undergo the ten days of observation, 37 took sick with yellow fever, were treated in the fever camp (by myself) half a mile away, returned to the main camp when well, and were free to go wherever they pleased.

Neither the observation camp nor the fever camp were infected (most of the employees being non-immunes), nor any place to which these refugees hied themselves. But thorough disinfection of the contents of their trunks and parcels had been practiced from the moment of their arrival at the camp. And there were mosquitoes at the camp!

This is the history of our Mississippi Quarantine Station.

If there be no available disinfecting plant, everything coming from an infected place should be opened and thoroughly aired in an isolated place before being admitted into another community. Mandeville and Covington should take notice. If a camp becomes infected, say at Panama, it should be moved to another locality with thorough aeration of all articles, effected at one or several places between the two sites, the old and the new.

To disinfect a place when once the germ has taken root and spreads, as ascertained by the occurrence of new cases, is a very difficult proposition. Treat all surfaces within the focus, and say a block further, by the application of powerful disinfectants, of liquid ammonia among others, which is a strong germicide and would cause the penetrating effect of cold by its evaporation. Every surface should be treated as if on fire. This would be possible only in a small focus in the very beginning of an epidemic. When an epidemic has taken the character of a general conflagration it is better to wait in patience for November, and not bother the people any more through intemperate zeal.

After the epidemic of 1897, in a paper to the Orleans Parish Medical Society, I wrote: The disinfection of the premises alone, in the course of an epidemic (not of small-pox, but of yellow fever) is irrational. When the neighboring houses, the grounds, the streets around are infected, the disinfection, even if efficient and successful, would come to naught. The infection would re-invade the premises, like a swarm of mosquitoes, as soon as the disinfection was over. There had not been one solitary success, after one or repeated fumigations. I repeat the same after the experience of 1905.

The screening of cisterns will undoubtedly diminish the breeding of mosquitoes, a consummation devoutly to be wished. Drainage and sewerage also. But what of the grass and trees? Deliver us of the pest, but give us peace, not as the false prophets, and continue the *thorough disinfection of objects enclosed in infected localities*; besides, if you wish, excluding the possibly infected mosquitoes which might be conveyed therein to infect other localities as you believe.

Even admitting that the transmission of yellow fever through the mosquito (the only *stegomyia*, ready only after a certain period, and only in the first two or three days of the disease. How

many failures this implies) had been proven as a fact; in view of the facts and arguments given in this paper, this mode of spread could not be held as the natural and usual; but, at most as the exceptional and experimental.

The same may be said of the transmission by the anopheles mosquito of malaria not transmissible in hospitals and elsewhere, outside of its habitat, the swamp; although the anopheles might be present in these places. The drinking of water contaminated with the plasmodium (*mal-aqua*) is the usual mode of conveyance of malaria, I am convinced, from the facts of the case.

It is here, in the United States, where yellow fever now makes an appearance only at long intervals, that further investigation as to the truth of its transmission by the mosquito should be made under the proper safeguards; especially the exclusion of all other factor than the mosquito. A place should be selected which would certainly be free from yellow fever, before, during and after the experiment. I will illustrate by a supposition: In 1905 we had a visit of yellow fever in New Orleans; a village, like Lewisburg, across the lake, could have been selected (where there are enough children to show, as witnesses, whether the place was infected at any time); a number of physicians, desiring to be immunized, would have most willingly lent themselves to the experiment. They would have reached Lewisburg without having exposed themselves to any possible infection by passing through any infected place, as ascertained before and after their passage. The selected mosquitoes would be carried in a net, a three hours' trip across the lake, and the inoculation accomplished under due precautions against any possible escape of the mosquitoes. The cases being watched would leave immediately for New Orleans with the first appearance of fever with due precautions not to endanger the inhabitants of the place. If there were no sign of the fever among these latter, especially among the children, who are non-immunes, at no time during the course of this epidemic, and only those experimented upon developing the fever, it might prove something. The physicians taking the mosquitoes over should carry no valises, bundles or enclosed articles with them. The importance of the conclusions to be attained for or against the theory is beyond estimation. No trouble of repeated experiments could be too much. *Quis potuit rerum cognoscere causa?*

**A Study of the Statistics of Pulmonary Tuberculosis in
the "Registration Area" of the United States
for the Fifteen Years from 1890 to 1894,
Based Upon the Returns of the
United States Census Bureau.**

By ISAAO W. BREWER, M. D.,

During the closing years of the nineteenth century the medical profession has been very active in endeavoring to prevent the spread of tuberculosis. This activity has been expended in many directions, principally in educating the general public to a realization of the importance of disinfecting the sputa of those sick with the disease. The health authorities of most of the larger cities have adopted regulations directed towards the suppression of the disease. Many new hospitals, dispensaries and sanatoriums for treating and instructing the sick have been established.

Those of the profession who have been closely associated with this great movement have felt encouraged with the results. It is well under such conditions to study the vital statistics of recent years to see just what has been accomplished, that we may correct false impressions, and not relax our vigilance by the apparent victory over this most fatal of diseases.

At this time we are fortunate in having from the Census Bureau two reports dealing with vital statistics. The first, "A discussion of the vital statistics of the Twelfth Census," is from the hand of Dr. John S. Billings, Sr., and the second, "Mortality Statistics, 1900 to 1904," is by Mr. W. A. King. Both reports deal with the statistics for the registration area, which comprises the States of Connecticut, Indiana, Massachusetts, Maine, Michigan, New Hampshire, New Jersey, New York, Rhode Island, Vermont, and the District of Columbia, together with a number of cities in other States where accurate records of births and deaths are kept. In the above mentioned area there was on June 1, 1904, according to the estimate of the Census Bureau, a population of 23,996,989.

The average mortality from pulmonary tuberculosis in the above area for the five years from 1900 to 1904 was 172.6 per 100,000. The rate was 180.5 in 1900 but fell to 163.2 in 1902, and then rose

during the next two years, reaching 178.1 in 1904. This fluctuation appears to be quite general throughout the area, and seems to be more than an accident. It is a field for study for those who have the time and the data at hand. The increase may be due to atmospheric conditions or to more care in diagnosis, or there may have been a falling off in the interest and care with which the sputa was disinfected.

Considering the larger cities for the five years from 1900 to 1904, we find Denver leading the list with a death rate of 410.1 per 100,000. This excessive rate is in all probability due to the large number of persons from other localities who go there to obtain the benefits of the climate, many of whom are in the last stages of tuberculosis and soon die. San Francisco is second on the list with an average mortality of 285. Of the 37 cities with a population of more than 100,000, sixteen had a higher death rate in 1904 than obtained in 1900, in the remaining twenty-one the 1904 rate was lower than the rate for 1900.

At Worcester, Massachusetts, the 1904 rate was 45.3 per 100,000 lower than that of 1900. At Boston the decrease was 40, and at New York 17.

In many of the smaller cities excessive death rates continue, which is to be expected, as for many reasons it is not always possible to carry out the necessary sanitary reforms in such places.

The following table shows the death rate per 100,000 from pulmonary tuberculosis in 23 of the registration cities for the fifteen years from 1890 to 1904. The cities are arranged in order of their population.

	1890-1894.	1895-1899.	1900-1904.
New York (Manhattan and Bronx)	319	270	354
Chicago	179	155	156
Philadelphia	243	210	216
Saint Louis	188	189	196
Boston	301	252	220
Baltimore	255	221	234
Cleveland	144	132	126
Buffalo	189	136	120
San Francisco	313	299	285

	1890-1894.	1895-1899.	1900-1904.
Cincinnati	232	220	231
New Orleans	338	320	326
Milwaukee .....	...	128	126
Washington	333	306	276
Newark, N. J.....	326	265	240
Jersey City	278	248	235
Indianapolis	200	198	192
Kansas City, Mo.	124	153	201
Rochester, N. Y.	192	169	135
Toledo	160	124	132
Syracuse	241	172	141
Paterson, N. J.....	272	240	185
Omaha	80	99	103
Memphis	285	240	221

From the above table we learn that there has been a gradual decrease in the death rate in most of the large cities. These statistics are most encouraging, but there are some marked exceptions that challenge the attention. The increase in the mortality during the years 1903 and 1904 require careful study. The cause of the high death rate in the Borough of Bronx, New York City, which occurred from 1901 to 1905, should be ascertained.

The conditions at Saint Louis, Kansas City, Mo., and Omaha are rather discouraging. The increase in rate at those cities can not be charged to health seekers, as none of the three cities can be considered as health resorts for those with tuberculosis.

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P. L. Thibaut, M. D., Chairman.

Isolation Hospitals.

By DR. HAMILTON P. JONES.

You will notice, as I describe the various hospitals, how radically our ideas and practices have changed regarding the prevention and isolation of Yellow Fever. In view of our knowledge to-day, things done at the beginning of my career with yellow fever, only nine years ago, seem to be ridiculous, but, as you will note by the following extract from my report to the Board of Administrators of the Charity Hospital on work done at the "New Orleans Yellow Fever Isolation Hospital", 1897, things were done with the utmost earnestness that are now known to be absolutely unnecessary.

1st Extract: Dressing rooms for the visiting physicians, ministers, priests, etc., were provided in a building constructed specially for that purpose at the front of the main building. Each visitor, without exception, was required to exchange his outer clothing for a suit of white duck, previously soaked in a solution of bichlorid of mercury which was allowed to dry on it; to exchange his shoes for canvas ones, and to wear a cap. At the conclusion of the visit, soap, water, towels and the necessary disinfecting solutions were provided. By the indiscriminate enforcement of these regulations the dangers arising to the community from the visits of physicians to the hospital were reduced to a minimum.

Absolutely no visiting the sick by friends or relations was allowed, and very few physicians gained admission.

I remember distinctly as though it were to-day, having the bed of a dying Italian child drawn near a closed glass window, so that her mother on the outside might see the last.

We knew no better then, but this is only one example of the

misery and suffering caused by ignorance, duplicated in thousands of instances by unnecessary shot-gun quarantines and panics.

Even more striking is the second extract.

All infected linen, sheets, pillow cases, towels, etc., from the hospital, were at once placed in a solution of bichlorid of mercury 1 to 1000, then boiled and washed. All urine, feces, urinals, night vessels, slop-pails and all utensils, such as sick-cups, thermometers, etc., were constantly disinfected with carbolic acid and solutions of bichlorid of mercury.

The utmost care was taken to destroy with fire all contaminating material capable of such treatment. The wards, halls, etc., were kept scrupulously clean and free from contaminating material, such as old shoes, rags, etc.

Catheters and surgical instruments were subjected to the usual process of sterilization.

In the cases of persons dying in the wards, the bodies were treated in accordance with the regulations of the Board of Health. The body was at once wrapped in a sheet wet with bichlorid of mercury 1 to 1000, after being divested of all clothing, and was then conveyed to the dead house. All burials, whether by the hospital or by friends, were done under the regulations of the Board of Health. The hearse to precede the one or two carriages allowed by at least a block, and the whole to move through the city at a rapid trot.

Cured patients were discharged after having their clothing and personal property thoroughly disinfected and their own persons given a thorough bath in a warm solution of bichlorid of mercury 1 to 2000, and being wiped off in pure alcohol.

Always before leaving the hospital in 1897 I submitted myself to a process of sterilization, but, in spite of all I did in this direction, I was in that summer the most lonesome of men. My company was not desired; if I entered a crowded street car, and my presence was known, at the next corner it would be emptied, many even leaving their meals at restaurants should I enter.

This, my first isolation hospital, was established by the Charity Hospital authorities, in order to protect that institution from infection, where the mortality rate had always been exceedingly high.

It was situated in the Beauregard School Building, on Canal street, and was well equipped. The site was isolated, and the

building was well ventilated and had very pleasant surroundings. There was no mosquito protection other than was generally practiced at that time. There is nothing special to mention about this hospital, except that a mob of citizens opposed to the location of a hospital in their midst, partially destroyed the buildings and cisterns by fire. No cases of fever were traceable to this institution.

My next experience in conducting an isolation hospital was in Cuba, during the active part of our campaign against Santiago, 1898. I landed at Siboney on the morning of June 25. That evening I was ordered by Gen. Kents, Chief Surgeon, to inspect the buildings in and about Siboney, in order to find a suitable place for a hospital. A number of these buildings would have, in a measure, answered the purpose. I, however, reported them a menace to the health of our troops, and a probable source of yellow fever infection, and recommended that they be burned. General Miles later had them burned, but not until quite a number of cases had arisen, traceable to them. It was generally noted that the men did not get sick of yellow fever unless they slept in houses. Those who had no occasion to go to the towns or city, or to visit for any length of time any huts or cabins, were singularly free from infection. I was, on the 7th of July, on account of the illness and departure of Dr. John Guiteras, made yellow fever expert at the front, and on the 13th of July was ordered to establish what was subsequently known as "Jones Yellow Fever Hospital", about three miles from Santiago. As long as we remained in the field no case originated among the personnel of this hospital, or any of the inmates, but as soon as we moved back to Siboney and occupied a saw-mill building, that had been used by the Spanish as a yellow fever hospital, my men began to sicken, and in a short time I had a number of cases to develop of a severe type, with considerable mortality, losing three nurses who had been six weeks in the field hospital with impunity. The sawdust pit of the mill was nearly full of water.

In what striking contrast does the management last summer of the isolation hospital stand to my previous management.

With the glorious knowledge given us by Reed and Carroll, last summer's fight was a fight in the open with a known enemy, and, armed with absolute knowledge and determination, we won one of

the grandest fights ever made. And what was that fight? It was to keep mosquitoes from biting a yellow fever patient before the end of the 4th day of the disease, and to kill any mosquitoes that might have done so, as soon as possible. I say any mosquitoes, because all that bite are a nuisance, whether they convey disease or not, although the *stegomyia* is the yellow fever conveyor.

I accepted the tremendous responsibilities of physician in chief of these hospitals imposed upon me with a firm belief in the truth of the mosquito theory and a firm determination to truly and consistently conduct them along the lines laid down by it, and that they did the work intended for them to do successfully, and became facts of record in support of this theory, is well known to you.

No protective or preventive measures were used other than the perfect screening of the openings of the buildings with 19-mesh wire gauze, and the mechanical contrivance of screened entrance and exit vestibule with three doors, no two of which could be opened by the same individual at one time, and additionally guarded by electric fans forcing a current of air outwards, too strong for a mosquito to fly against, even though all three doors were open. In addition to these mechanical devices, some one was always stationed in this vestibule to guard additionally against entrances of mosquitoes, either in packages or otherwise.

No cases developed in this hospital or were traceable to it.

No attention was paid to the fact as to whether doctors, nurses, help or other inmates were immune or not.

Visiting the sick by relatives and friends was permitted and encouraged.

Physicians and citizens were urged and invited to visit the hospital, and I estimate that over seven thousand persons availed themselves of this privilege, without a single accident.

No disinfectants were used for any purpose, except to destroy mosquitoes.

The bodies of the dead were not disinfected, and many largely attended funerals were held directly from the hospital.

The laundry, although often covered with feces, urine and black vomit, were carried directly from the wards and beds to a large Catholic convent in the neighborhood, without disinfection. It is remarkable to note that this institution was one of the few public institutions in this city to entirely escape the disease.

Of the greatest importance is the fact that many cases were brought to these hospitals from the country without in any manner influencing the victorious fight waged here.

We have proven that we can and will control yellow fever, if it is known to exist, and that the presence of a well constructed and managed hospital is not a danger to a community, but a safeguard and a place of refuge for the terror-stricken, as was evidenced last summer by nine refugees from stricken Rosetta, Mississippi, coming into the hospital of their own free will, because they believed, what was really true, that the hospital was the safest place in the city for them.

In all the hospitals with which I have been connected, every one who was associated with them had to do the most tremendous amount of work in a few hours, getting together the physical necessities for the housing and care of the sick in the face of unreasoning panic and fear of mob violence, and incendiarism.

Isolation hospitals are for the protection of the community primarily, and the immense weight of the moral responsibility on those in charge is not to be known or understood, except by those who have borne it. Yet it rests more heavily on the community that supinely waits until the crisis is come, and then in a day establishes an emergency hospital, placed in some locality against the wishes of its neighbors.

It takes a long time to establish confidence in any new thing, and no sick man wants to travel unfamiliar fields.

In handling any disease requiring isolation, you must isolate promptly, and especially in yellow fever, and I beg of you as you value the lives of yourselves and families and the prosperity of your city and State, to see to it that a permanent isolation hospital be planned and built at once and kept ever ready for use.

We were lucky last year. Another year may find that the absence of a hospital will cost us dearly, in letting slip the opportunity of treating the first cases.

And now, gentlemen, I wish to extend to you, through the courtesy of Dr. Chassaignac, chairman of the "Public Health Association Executive Committee," an invitation to visit the second hospital established last summer, so that you may see for yourselves what kind of an emergency hospital we used and which is now

ready for almost instant use. Unfortunately, the building is not ours, and we must at an early date select a site and build a permanent isolation hospital, for the care of scarlet fever and diphtheria, and, if the unfortunate necessity arises, for yellow fever; smallpox, in my judgment, should never be cared for, except by itself. To-morrow from 12 to 4 the hospital will be open to your inspection.

How the Yellow Fever Situation was Handled in Kenner in Year 1905.

By DR. STEPHEN D. GUSTINE.

I shall not touch upon the pathology, symptomatology or treatment of yellow fever, but will give a brief history of the sanitary method employed in managing the situation in order to eradicate the disease. Said method being based upon the undisputed fact of the transmission of yellow fever by the female *stegomyia fasciata*, was characteristically the same as was employed in all localities.

The fever was first discovered here on the 18th day of August, in a section of the community known as "Hanson City," and thickly inhabited by Italians.

It was evident that the disease prevailed previous to its discovery, for on the following day, after searching thoroughly different sections of the town, other cases were found which had been sick with the malady several days, hence it is readily seen that the fever had secured a strong grip before it was discovered, thereby adding to the seriousness of the situation; more so on account of the class of people and the inability to at once erect a hospital.

Previous to the opening of the hospital, it was absolutely impossible to check or gain the slightest advantage, even though every effort, such as fumigation, oiling and screening of cisterns, was employed. Instead of deriving any advantage, the condition became worse, more cases being added to the daily list. This state of affairs was due to the visiting proclivities of the Italians, it being absolutely impossible to prevent them visiting the infected houses, thus spreading the disease rapidly to every section of the community.

Though I made every effort possible to secure a hospital, there

was no response from the officials of the town until the sixth of September, when Dr. G. M. Corput came upon the grounds, and in a brief but convincing talk to the city council, urged them into activity.

The fine double story Firemen's Hall was secured gratis, and the equipping of same was immediately begun. In exactly five days thereafter a splendid, naturally ventilated hospital was receiving patients.

Absolutely no trouble was experienced in getting the sick to enter. On the contrary, they were glad to do so, readily appreciating the comforts and advantages offered them.

A decided advantage offered to myself was the implicit confidence the Italians placed in me—not in a single instance hiding their disease—hence enabling me to fumigate every infected house, thereby securing an early control of the situation after the hospital was opened.

Each case upon its discovery was removed to the hospital in a screened wagon fitted out as an ambulance, and the infected house fumigated with sulphur—four pounds to the room—after all cracks and openings were well closed.

Very rarely was there a recurrence of the fever in a house thus treated, and when there was, it was always traced to some other house the party had visited.

Quite a number of the better element preferred to screen their homes and be treated there, and in every such case, if not all, the majority in those homes were stricken with the fever.

On the twentieth of October, exactly thirty-nine days after opening the hospital, complete control of the situation had been gained, and the hospital closed.

When this history was started I did not intend citing any case or mode of treatment, but upon reflection, after reading over the charts of various cases treated at the hospital, I was much impressed with the history of a certain case, especially as it somewhat proves the theory that suppuration, produced by pyogenic microbes in yellow fever, generally proves favorable results.

Mrs. M., age 22 years, Italian, diagnosis yellow fever, admitted to hospital September 25, at 3 p. m., temperature 101 F., pulse 86, albumen in urine about 10 per cent. Given immediately sodium sulphate, one ounce, and a mixture composed of kalii nitratis

drachm i, liq. ammonii acetatis, three ounces and a half, syr. aurant flor., half ounce; half ounce every three hours.

Eleven o'clock that night she had a loose stool, temp. 101, pulse 100.

On the morning of the 26th her temperature was 102, pulse 106.

Gave a hot hip bath, as she complained of her back hurting her, also applied a hot water bag to back after bath. Toward evening the temperature rose to 103 4-5 at 3:30 o'clock, when the patient was wrapped in a sheet wet with warm water, and fanned for half an hour, which reduced the temperature to 100 4-5, P. 98, at six p. m.

At 9:30 p. m., exactly three hours after, the temperature rose to 103 2-5, P. 108. She was again placed in a wet sheet and fanned one hour, before T. 102 was reached.

On the 27th of September temperature was at 9:30 a. m. 103, P. 98, evening at 9:30 T. 103, P. 100. During this time nothing but cracked ice was given, as she complained of nausea, and on the following day, at one o'clock, had black vomit. I also discovered an abortion in progress, and immediately packed the vagina.

For the vomiting milk of magnesia and creosote were given with good results.

The packing which had been put in on the morning of the 29th was removed that evening, and as there was no advance made in the abortion I repacked. Temperature, a. m. 100 2-5, pulse 98; p. m., temperature 102 2-5, pulse 104.

The morning of the 30th her pulse numbered 82, and was very weak. Temperature 100 3-5. Removed the packing, but still found no advance, with the exception of a sufficient dilation to enable me to feel the fetus. I intended to curette that morning, as the pains were not sufficient to expel contents of uterus, but found her too weak. Placed her upon strychn. sulph., gr. 1-60, every two hours; also panopepton, and predigested beef juice.

Her condition was considerably improved the following morning; temp. 101 3-5, pulse 88 and stronger, but I deferred the operation, because upon removing the pack found considerable progress. Repacked with the expectation that in the evening all contents of uterus would be expelled.

She was bothered considerably during the day with nausea. At 5 p. m. her condition grew decidedly worse, temp. 104 2-5, pulse 116. Packing was removed but contents of uterus remained intact.

The discharge, which had previously been healthy, was of very foul odor. Gave her a carbolized douche, and repacked. Placed her in a wet sheet, and had her fanned until temperature was reduced to 102 4-5, P. 100.

The following morning, October 2, I curetted, freeing the uterus of all contents, which were exceedingly foul, and packed same with bichloride gauze.

The temperature, at the time of operation, was 102 4-5, pulse 104.

At 4 o'clock that evening temperature was 100 2-5, pulse 100. No anesthetic was used on account of her weak condition, and she stood the operation splendidly, suffering but little pain.

The following morning her temperature was normal and pulse 96, remaining so, or subnormal until October 6, when she was discharged cured.

The urine was examined daily and albumen found each time, but on the decrease. It looks very much as if the pyogenic infection mitigated the yellow fever condition, and as I have had several other cases which suffered with a mixed infection, with even greater severity, and recovered, I am much inclined to the belief that the pyogenic microbes destroy or inhibit the action of the yellow fever germs.

I conclude this sketch with the assertion that the only sane, sanitary and successful manner in which yellow fever outbreaks can be properly and humanely handled, is through the hospital and correct fumigation. The hospital furnishing the comforts and attention, which not alone alleviates the suffering, but considerably reduces the mortality, and the fumigation, which kills off the pestiferous insect that conveys the disease.

An Epidemic History, with Kindred Remarks.

By DR. F. R. BERNARD.

It is my purpose in this paper to give the cause of ingress and history, together with the progress and conduct of the epidemic, as it appeared in the town of Lake Providence, Louisiana, during the

summer and fall of nineteen hundred and five; likewise, to offer additional remarks germane to the subject.

Originating from a solitary focus of a violent type, inducted into the place by an Italian woman on the twenty-first day of July, yellow fever endured until the seventeenth day of October, or a period of almost three months.

The stricken individual, arriving from the city of New Orleans, remained within the corporate limits four days before the medical profession and sanitary authorities knew of her presence. She presented no unusual appearance, being neatly attired, and moving cheerfully about her environments, with no indication that the poison of the dread disease had permeated her blood; her temperature was 101, pulse about 80, tongue broad, slightly coated, with possibly a rubicund appearance about the edges; the gums were not red or streaked; no complaint of backache, or pain in the body was alleged. The ensuing day the woman was moved to another part of town, where she became confined to bed with a violent case of yellow fever, the severity of which was greatly augmented by the constant administration of solid regimen by her untutored friends. Mosquero jelly, which was prescribed about the sixth or seventh day, was used as an unguent over the whole body, instead of being given into the stomach. Bread, macaroni, salad from gourd leaves, and other heavy viands were given through sheer ignorance and insistence by these ignorant people, until the time of her death, fourteen days after arrival.

Upon this woman, Annetti Vincenzi, rests the responsibility of the yellow fever epidemic at Vicksburg, Tallulah, and Lake Providence.

The citizens became turbulent and vindictive, and would not permit her body to be removed to the cemetery, finally compelling an interment in the rear of the little cottage in which her demise occurred.

As soon as the disease became manifest, the whole Italian colony, comprising forty-one individuals, were transferred upon the site of an old and historic burial ground, which had been filled by the yellow fever victims of eighteen fifty-three. Here their temperatures were taken twice daily until the time limit expired, no new cases having eventuated. Fumigation with sulphur, the use of pyre-

thrum, screening, the employment of oil, cleaning of the streets and surroundings of habitations, were energetically called into requisition. A period of sixteen days elapsed, with such an unparalleled health in the community that the inhabitants congratulated themselves upon their escape. The pleasurable hope was only ephemeral, and was soon dissipated. About the sixteenth day of August, when the health officer reported to ten or more prominent citizens that two cases of yellow fever existed within the confines of the town, these prominent gentlemen replied, "Oh, do not declare it, but call it suspicious.

About this time in the tragic experiences of Lake Providence, a Marine Hospital representative appeared in the arena, to become chargé d'affaires of the already threatening situation. Upon his personality no reflections are intended to be cast. What is said is in the abstract, for it is known that he is a courteous gentleman, scholarly and scientific in his professional attainments, but especially and relatively the right of censorship condemns his mode of procedure. Reprehensibly, at the matutinal hour, the bells pealed forth invocations to the already excited populace, to assemble in public places, where they were addressed from day to day on the exigencies of the fever invasion. Though the marine hospital surgeon met and affiliated with these assemblages, it is incredible that he could have inaugurated them. At any rate, he operated almost exclusively with these excited civic gatherings, and not with the board of health, except in rare instances, where some minor motion was to be legalized and made authoritative. His office was established at the private residence of my much appreciated and esteemed friend, Reverend C. Mahe, the latter filling the requirements of secretary in a most excellent and worthy manner.

The fever continued to increase, spreading, and presenting a graver degree of violence. The alarm was exceedingly great, and three trains bearing the excited populace, hurried away. By order of the surgeon general, another of the Marine Hospital Service appeared on the scene. If anything whatever was accomplished by him here, it goes without challenge that it was not observable. The health officer in person conveyed him to all public and private patients of whom he had charge and control. The accompaniment of this round of visits was concluded by the superb surprise given

the health officer by the marine surgeon, when he requested to be driven to a private residence, where with another gentleman and the first marine arrival, he desired to hold a conference on the situation.

Thus it will be seen that the board of health were entirely ignored, and beyond any question very discourteously treated. From this time forward the local health authorities were a mere figure-head, and were absolutely not responsible for the conduct of the epidemic. Hospitals were established for both negroes and whites, the health officer giving his private hospital free for the latter. A negro physician, a man of considerable ability, and for whom the writer has the highest respect, was placed in charge of the negro emergency hospital. Every physician desiring removed his patients to the white hospital, where there were fourteen trained nurses in constant attendance.

Having now made reference to the cause of invasion and the appearance of the marine hospital service in our midst, and its relationship with the technic of conducting the epidemic, the writer will attempt to furnish, from a personal and practical standpoint, a symptomatology of yellow fever.

In an initial manner, let it be said that this malady is the most insidious of all diseases, and manifests itself in innumerable symptoms. Not infrequently it is ushered in with a chill, which usually comes on at night. The ensuing fever is seldom of a high degree; rarely observed over 103, in almost every instance 102½ in the beginning of the first day, when on the second day thermic readings show a marked decline. This is indicative of the end of the primary stage of the fever. Occasionally mild types of infection convalesce from this finality of the incipient manifestation. In the greater number of instances there is, of course, a recrudescence of temperature. Throughout the whole trend of yellow fever there is a discrepancy and a want of correlation between the pulse and the temperature. When the latter is 102.5, the former is relatively slow, not being more than 75 or 80. In the period of convalescence, while the temperature is 99 to 100, the pulse often seeks as low an ebb as 40. There is no symptom that can be regarded as more pathognomonic than that of relationship of pulse to temperature. This seems to be exemplified and

limited to the adult patient. In two instances of children who came under the writer's observation, the pulse reached 150 to 180. Both recovered. Cephalalgia, accompanied by myalgia of all the muscles of the body, more especially those of the dorsal region, is generally in evidence. The eyes are often suffused, and present considerable capillary congestion, especially in close proximity to the external canthi. The face is sometimes flushed, but not in every case. In a rare number of instances it furnishes an expression of absolute muscular inactivity, or the quietude of a person just emerging from a drunken debauch, while the eyes, where there is a consciousness of being stared at, exhibit the greatest vigilance, and are rapidly rotated in all directions. This condition has been nominated "a Guiteras countenance." The gums are red, with white streaks, and frequently bleed freely. The teeth are so dry and dead in appearance that they will match the bleaching bones upon the commons. Black vomit and suppression are two symptoms offering an unfavorable prognosis. Albumen is pathognomonic, *ceteri paribus*; i. e., if yellow fever was existent, if the patient furnished no history of chronic malarial fever or interstitial nephritic trouble, then it is fair to adjudge, on the third or fourth day, when albumen appears, that it belongs to a case of infection. The tongue is finely pointed, with roseate edges, which completes the general symptoms. It has many exhibitions; sometimes it wreaks its fury upon one organ, then upon another. Of the fifty-eight cases under my personal supervision and treatment, six died. Let me make mere mention of a poor youth whom I had in the hospital, and the immediate cause of whose death I recognized over the phone. The nurse summoned me, and the characteristic cry of meningitis greeted my ears. Arriving, I found opisthotonos, and well-marked symptoms to substantiate my apprehension. Calmly remarking that the boy had meningitis, the nurses, as though awakening from an inquisitorial dream, remarked: "Doctor, you are unquestionably correct; look at the neck, and the eyes"—the latter then being pronouncedly strabismic. This is casually spoken of as a singular instance, illustrating one organ of the many that the infection fastens its deadly talons upon.

Confronted with a problem unparalleled, the profession is called to treat and contribute remedial succor.

TREATMENT: What is it, and of what does it consist? Negative, or at any rate, limited interference meets the approval of those most in experience. The *prima via* should be thoroughly unburdened, as an essential procedure frequent draughts of mineral waters of a light specific gravity; myalgia and cephalalgia are to be relieved by topical applications, preferably menthol; nausea, by minute doses of cocain, and ice-bags guardedly applied, these latter in some cases are unwise; hemorrhages are controlled by large doses of adrenalin chloride, and ergotole; congestions and collapses by hypodermic injections of atropia, subcutaneous injections of normal salt solutions, and applications of hot packs; kidney suppression was fortified against by constant high enemata or large hot salt solutions; suppression often came, followed with uremic convulsions and death. Topical applications over the regional portions of the kidneys were without avail. No diet of any description was permissible until after five full days had elapsed, and not then if there were any considerable thermal indications. Egg albumen, broth, Ducro, minute swallows of brandy, were early advised administrations. The heart was at all times sustained with strychnin hypodermically. Sponging with alcohol and hot water reduced high elevations of temperature, and greatly added to the comfort of the patient. Glycothymolin, listerin, etc., applied to the gums on absorbent cotton, furnished gratifying relief.

There is no pretense to a newness of the utility of measures adopted, this mention being merely a constructive part of epidemic history. Opportunities for pathological research, though not abundant, were obtainable, to reveal fatty atrophied kidneys, and inchoative fatty liver and heart. Extravasations of blood were found under the dura.

The disease made its appearance in several wards of the parish, notably at nearby railroad stations. It was a routine duty for trains and vehicles to convey the stricken individuals to the town hospitals. On one occasion, a very dark night, I saw a hack full of negroes, packed like sardines, driven into town. Among the number was a woman who for three weeks had tried to pass the quarantine and enter the town; at least, she feigned yellow fever; filling her mouth with ground coffee, and going through the me-

chanism of vomiting, she frightened the plantation owner till he was glad to send her into town.

In a population of three thousand people, there were three hundred and twenty-seven cases and twenty-three deaths, a much better record than that of 1853, of which authentic and well-preserved data shows the mortality to have been, from September 2 to October 17, 128 deaths, in an estimated population of 248 inhabitants. So much for modernized technic in the management and control of the disease.

Dr. Carlos Finlay, of Havana, in a personal letter to me, states that he has in his possession old records showing that more mosquitoes of the gray variety existed in Lake Providence in 1853 (probably the stegomyia) than was ever known. The denizens of the place of that year concluded that the epidemic originated from a lady who developed the disease while observing a passing steamer in midstream.

We now come to a subject, the importance of which is paramount to all other considerations. It is that of sanitation in small towns and rural abodes. To secure the speediest ablation of infection, there are two principles, simple propositions, the exercise of which is mandatory for successful results. The first proposition necessitates, at the early advent of the disease, the removal of the individual citizen, the receptive body, from the foci of infection until the frost period. The second proposition has for its object the destruction of the poison-bearing insect. This latter can possibly be done by the usual methods pursued, but only a minimized ratio are demolished and diminished on the outside.

There was not a concurrence of opinion with the Marine Hospital representative and myself, when he publicly advised all citizens to remain at home, and lend their utmost endeavors to suppress the disease. It is immunity and workers, and not plurality of individuals, needed to meet the exigencies of epidemic invasion; were it otherwise, we might call for volunteers, and in proportion to their influx, we would have an increase in the cases, as well as in the mortuary lists. Hence, the advice to remain at home was, in my opinion, not well advised.

I am not of the opinion that the exercise of modern methods stamps out the disease. Beyond all question, it modifies and con-

trols the death rate. Let us go back to the year fifty-three, when science had not even donned its swaddling clothes, at least, there were no technicalities regarding yellow fever management comparable to those of to-day, and we find the last case reported on the 17th day of October. On the identical same day in 1905 we saw the last of our cases, though a high-class, modernized system of sanitation was adopted. In the years 1878, 1893, and 1897, the disease disappeared practically as early, and quarantine restrictions were removed. Commercial interchange and relationship were established between the city of New Orleans and the rural districts about the same dates as in the year 1905.

The most practical observer will accentuate the fact that most fevers depending upon insect life show a decadence about the middle of October, when the swarm of culicidæ instinctively seek hibernation. That the adult mosquito endures through the winter months is proven by the circumstance of their existence in residences during those months. A gentleman informed me a few days since that he had caught a *stegomyia* in an envelope.

One and one-half carloads of sulphur were used in the epidemic. Large quantities of pyrethrum likewise were utilized. Nine hundred and eighty-three water barrels were destroyed. Almost every domicile was screened, and it afforded no little amusement to see a cloth with a large hole through it screening the front door, while the back doors and windows were wide open.

I will submit that the Marine Hospital Service representative followed the up-to-date sanitary methods systematically, and I believe conscientiously, but I must say, that after leaving here, it was ungenerous in him to anathematize the local health officers by reading a paper before the Tri-State Medical Association, averring that "local health officers were dismal failures, with exceptions." This is ungracious, for several reasons; primarily, because the health officers here and in this vicinity extended him every courtesy, and were not aware of failures on their part, and which results do not justify; secondarily, gentlemen living in glass houses should not throw stones.

This censor of local health officers was called to diagnose the early appearance of the disease at Tallulah, Louisiana. A clean bill of health was the result, so far as infection was concerned,

and the affirmation that the cases were not yellow fever. At the same time this proved to be the incipency of a severe and fatal epidemic. He also stated a case here, with the aid of his microscope, to be malaria, yet the patient died with a dreadful case of yellow fever.

I refrain from stating other instances, and merely interlard this rejoinder as a matter of personal privilege. It is mentioned in a most kindly spirit, yet it is history, and I am supposed to be writing a true history of the epidemic at Lake Providence in 1905. You will therefore pardon the episode, if not a digression.

It would seem that the best sanitation is a preventive system inaugurated by a wise, judicious and effective quarantine. Whether or not the basic law has its limitations in the establishment of national interference, there is nevertheless a strong rationalism in the suggestion of governmental control of maritime quarantine. Inasmuch as the power is vested and centralized in the whole federation of states to make and enforce treaties, and exclusively, so far as foreign nations are concerned, to exercise police protection, it meets favorable consideration that our government should assume and carry into effect measures looking to immunity from infection. This authority and protective measures should begin at these infected ports, and end, inclusive, with the littoral lines of the republic. Just what potency is woven into the fabric of the constitution, and precisely what limitations it possesses, to permit the national government, being a prime factor of the regulations and methods of quarantine, must emanate from the legal lights of constitutional jurisprudence. The interpretation of the medical profession regarding constitutional authority, as refers to quarantine, may be scholarly, but it is surely bereft of legal exactitude and recognition. Assuming that restrictions of quarantine are exclusively of governmental concern and fiat, then in harmony for greater effectiveness, the states should continue in a corollary way, both intra and infra systems of quarantine. A federal constitutional clause provides for the regulation of foreign and interstate commerce, which must have reference to inanimate commodities, as bread-stuffs, grain, etc.; but does it imply the right to control the movements and police the citizenship of individual states? A felony committed, no matter whether by a citizen

of New York or of Texas, the court in the state where the act was perpetrated passes in judgment upon the perpetrator. Therefore, it would appear that should an individual carry infection from one state to another, imperilling the health and lives of its inhabitants, it would properly be within the jurisdiction of that state to prevent the crime, or punish the culprit.

Each state, which is the segmentation of the integral government, is interested in the free passage of traffic; therefore, in solido, the federation of states is mutually concerned in an open and untrammelled movement of the great systems of railway communication. Hence, the national government logically should maintain an uninterrupted intercourse throughout the states, by this system, provided that each individual state has enacted protective and sumptuary laws against the transmission of infective diseases to other states.

Science has positively and conclusively demonstrated a safe method for individual mobilization. The people must be continually educated in conformity with scientific evolution, sanitary progress, and its resulting absolutism. Shot-gun quarantines should be relegated and transferred to the shades of a dark and ignorant past, and the beacon lights of the century's knowledge should not only shed their incandescent glory upon sanitary achievement, but should burn and blot from the world's history, upon the pyre of lamentable ignorance, frenzied and physical opposition to the itineracy of commercial life.

Dengue and Yellow Fever.

By DR. G. FARRAR PATTON.

The writer wishes to be understood as endeavoring to present the subject under consideration from the standpoint of expediency and safety to the public health, rather than with any vain hope of helping to solve a clinical problem which has confronted and confused the medical profession for several generations.

Freely admitting the existence of dengue as a separate entity, it is undeniably true that from time immemorial groups of cases diagnosed as dengue by experienced physicians have regularly pre-

ceded the appearance of yellow fever epidemics; so much so that it was facetiously remarked among the laity more than a quarter of a century ago that "Mild yellow fever cases which recover are dengue, and severe dengue cases which die are yellow fever."

Coming down to the most notable instances of recent years we need only recall the following historical outbreaks:

Ocean Springs in 1897, where some four hundred cases of a mild fever regarded as dengue occurred before the death of a victim with pronounced symptoms of yellow fever and the evidence afforded by an autopsy forced upon the confused medical men watching the progress of events the conclusion that at least some of the cases were genuine yellow fever.

This is not meant in a spirit of criticism, for the writer was one of the first official party of investigators who visited Ocean Springs in 1897 and signed the joint report made on that occasion to the effect that the prevailing disease was dengue. Within a few days after that investigation another party, comprising some of the ablest and most experienced physicians of Mississippi and Alabama, visited Ocean Springs and reported finding only dengue.

It is to be remembered that both parties of investigators were state health officials actuated by the most powerful incentives to discover yellow fever if it was present.

It was not until about a week later that a third commission, consisting of members of the first two parties, reinforced by the addition of U. S. Marine Hospital officials, were able to decide, after an autopsy, that yellow fever was present in Ocean Springs.

About the same time Dr. Juan Guiteras, the most noted yellow fever expert of the day, arrived on the scene and after a most exhaustive investigation reported to the Marine Hospital Bureau in Washington that of twenty-eight cases examined by himself three only were yellow fever, the remainder being dengue. By that time the infection, whatever one might choose to call it, had reached New Orleans, Mobile and certain localities in Mississippi, ultimately causing many deaths and widespread panic.

Laredo in 1903. When in the summer of 1903 people in various little settlements along the line of railroad from Tampico to the Texas border began to become ill with a mild fever occurring in groups, the press dispatches announced local epidemics of "dengue,"

the towns of Linares, Victoria and Monterey being successively affected. When the sickness reached the little Mexican city of Nuevo Laredo it persistently continued to be "dengue" until one of the native physicians contracted it and died with typical symptoms of yellow fever.

By that time the infection had crossed the Rio Grande river, but still masquerading as "dengue," as evidenced by the wording of an official telegram sent out from Washington to the effect that in Laredo, Texas, there were reported sixteen cases of "dengue," seven with albuminous urine.

It is now historical how that entire section of Mexico suffered with yellow fever, and how the disease clung to Laredo, Texas, until late in the winter, despite the most heroic fight on strictly modern lines, backed up by the whole resources of the federal government and of the state of Texas.

Havana in 1905. While practically nothing was heard of an epidemic of dengue in Havana until after the appearance of yellow fever in New Orleans in 1905, it subsequently transpired that almost the entire non-immune population of the Cuban capital had suffered with dengue during the summer, the number of cases being variously estimated at from 5,000 to 20,000. Later in the season it had to be officially admitted by the local health officials that Havana had some yellow fever, the origin of which not even the most ingenious explanations could trace to outside sources, and it is now held by Dr. Thomas, resident physician of the Mississippi River Quarantine Station, that the infection was introduced into New Orleans by direct passengers from Havana early in the spring of 1905.

This belief is favored by the fact that the fast passenger steamers of the Southern Pacific Co., which make the run from Havana to their wharf at New Orleans in less than three days, land directly opposite that quarter of the latter city where the fever was discovered among the secretive Italian population.

Conclusive evidence of this origin of the fever of 1905 has not thus far been obtainable. The first cases would doubtless have been mild and have attracted no attention.

In this connection it is to be remembered that it was only after four hundred people had the "dengue" in Ocean Springs that

the first death from yellow fever occurred there. Also that the disease, even when recognized as yellow fever, often runs its course in a community with but little mortality, as in St. Mary Parish in 1898, where, as reported by the veteran health officer of the parish, Dr. C. M. Smith, there were more than twelve hundred cases with but eleven deaths. In the same summer Alexandria had two hundred cases without any mortality from a fever declared by competent men to be yellow fever.

Now in view of all these facts and of similar experiences in the more remote past, what is the practical conclusion that we find forced upon us? It is that either the majority, if not all, of the supposed dengue cases are really mild yellow fever, or that the two diseases may be and commonly are intercurrent in a community, causing such confusion as to baffle the most honest health officials.

The next practical question is, are we to learn nothing from such costly experience? How many times do we want lightning to strike before we can take a hint, especially one impressed upon us with such hard knocks as we have all suffered from dengue in the past?

What does it matter if some of the cases may be actually dengue, if some of the others are equally certain, as it always seems to happen, to turn out to be yellow fever when it is too late to counteract the damage already done?

The most rational course to pursue is obviously the adoption by those living in infectible territory of a rule under which *all* dengue occurring in the summer and autumn will be regarded as potential yellow fever, just as we have, after years lost in wrangling over clinical points, finally placed membranous croup under the same ban as diphtheria.

If our friends elsewhere wish^t to stand on nice clinical distinctions and to class as dengue those mild cases of fever which are not typical of either disease, let them do so, but at seasons of the year and under circumstances which in the past have proven dangerous, let us remember Ocean Springs and Laredo and Havana, and take adequate measures to keep that sort of dengue at a distance.

An occasional case of dengue, real or otherwise, need not cause apprehension at a time of the year when yellow fever could not spread in our climate, but as pointed out in a recent report of the Louisiana State Board of Health:

"Cases of dengue occurring in groups in the summer and autumn at localities along paths of travel from yellow fever infected districts, regardless of non-mortality, will ultimately prove to be yellow fever."

This proposition is in strict accord with recorded history and if taken as basis of action will go a long way toward affording immunity from an invasion of yellow fever.

Fortunately, the complete measures of protection now known to be adequate do not restrict the movement of merchandise, and as regards human beings are neither cruel nor oppressive, demanding only that those who have been exposed shall be detained under observation long enough to cover the incubation period of yellow fever, and that vessels and other carriers arriving from suspected places shall be freed of mosquitoes before admission to infectible territory.

In conclusion, it is urgently contended that the time has long past for standing on ceremony in dealing with dengue, and that health regulations should be framed accordingly.

Orleans Parish Medical Society Proceedings.

President, DR. C. JEFF. MILLER.

Secretary, DR. AMEDEE GRANGER

141 Elk Place, New Orleans.

In Charge of the Publication Committee, DR. AMEDEE GRANGER, Chairman
DRS. GEO. S. BEL and E. H. WALET.

DR. L. SEXTON read a paper entitled:

The Early Diagnosis and Treatment of Phthisis Pulmonalis.

In view of the climatic and other successful treatments of early phthisis pulmonalis, it becomes necessary to make a diagnosis of

the disease just as soon as possible in order to do the greatest good to the largest number of subjects.

With this end in view, we will consider some of the first symptoms and conditions which should cause us to recommend the early removal and treatment for tuberculosis, as it is generally conceded that any treatment, whether climatic or otherwise, must begin in the incipency of the disease if any permanent good is to be accomplished.

The beginning period of tuberculosis is often overlooked.

The symptoms of incipient tuberculosis vary very much, but among these first noticed are languor, slight loss of flesh, pallor, weakness on exertion, probably dyspnea, chilly sensations and digestive disturbances. If the temperature is taken it will be found to be a little above normal in the afternoon. There may or may not be slight cough, hemoptysis.

Temperature is a very important factor in the determination of tuberculosis, especially in a malarial district, and it is not uncommon to see a patient running a low form of fever, progressive emaciation, failing energy, with night sweats. The temperature of tuberculosis is usually intermittent, though obstinate. It increases with the slightest exertion, associated with a pulse of unusual rapidity and irregularity. This will often be seen in the ordinary malarial fevers of long standing, and to further complicate diagnosis these tuberculous fevers yield readily to quinine, only to rebound soon after the agent is removed. A blood examination may decide the diagnosis if positive, but is not conclusive if negative. If the above condition exists, the patient should be subjected to a rigid and searching physical examination.

A fever in tuberculosis, produced by exercise or exertion, is not immediate after the exercise, but follows in about six or eight hours, the same as it would from a tuberculin reaction, and it may be of decided diagnostic value to inquire into the history in these low typed fevers.

In many cases the disease begins with an attack of pleurisy, simple bronchitis or lagrippe. We should be suspicious of cases of pleurisy and bronchitis following whooping cough, measles, typhoid fever and influenza.

The subject at this time may not be appreciably ill, he may deny the existence of any cough, except when first arising in

the morning, still if you will weigh him you will find he is continuously losing flesh. Following this, a low intermittent grade of fever, occasional pains in the chest, with slight indigestion and general languid feeling. Up to this time we may have no physical signs of the disease except at the apex of the lung, where dullness on percussion, with harsh breath sounds may be discovered upon close examination.

Of the physical signs, careful examination will bring out slight dullness, and moist crackling rales over the affected area at the end of inspiration. The percussion must be very light. There may be decreased expansion over the affected side or area. The breathing sounds a little harsh. Increased voice sounds; especially the whispered voice.

In physical examinations, every variance from normal should be regarded as suspicious, and the patient should be kept under observation till the diagnosis is cleared up. The signs most frequently met in incipient lesions, are dullness and diminished respiratory murmur. The normal ratio of inspiratory and expiratory murmurs are destroyed both in intensity and duration, the expiratory takes on a harsh and bronchial quality, and is lengthened. These signs at the apices indicate an apical catarrh, usually of tubercular significance.

Rales in any location, especially if continuous, are the most important and positive sign that we have, even in small quantities. These may appear before any appreciable respiratory changes take place, and great care should be taken to elicit them, as they may only be heard at the end of inspiration.

Expiration is generally high pitched and prolonged.

If you will make a careful examination between inspiration and expiration with a tape measure, you will find that it is usually less than three inches. Stripping the patient to the bare skin, you will note the chest is either flat, shallow, or long and narrow. The ribs are plainly seen; the neck, in thin persons, is long and usually bent forward. In other instances, the patient will say he is easy to catch cold, and that each succeeding cold is more persistent than the former one. Daily evening fever, emaciation, and in blond subjects, the burning cheeks are to be observed, soon to be followed by night sweats as the disease progresses.

Pleurisy is one of the most common onsets of tuberculosis. Out of 90 cases of chronic pleurisy one-third terminate in tuberculosis, the attack beginning with either effusion, or the dry variety of pleurisy.

Strange as it may seem, pleurisy is much more often a forerunner of tuberculosis than are laryngeal symptoms. Hoarseness may be produced by pressure of the infiltrated bronchial glands upon the recurrent laryngeal nerve and produce an early and very obstinate symptom.

ONSET WITH DYSPEPSIA: Life insurance companies usually reject all under weight subjects who suffer from chronic indigestion. There is such a close affinity between gastro-intestinal troubles and pulmonary tuberculosis that this rule has become operative.

Chronic sore throat, more or less loss of voice, muco-purulent expectorations are the forerunners of tubercular laryngitis. Some of this sputum may contain bacilli before the lungs are even infected. After expectoration is noticed, and particularly in the pharygeo-laryngeal type, the tubercle bacilli may be found previous to any involvement of the lung whatsoever, but failing to find the tubercle bacilli upon one or many examinations does not prove the case to be negative.

Very often hemoptysis is the first symptom calling attention to a tuberculous lung. It may appear as streaks of blood in the sputum, often and repeated, slight hemorrhage; or it may come in considerable quantities. At the first onset physical signs may be entirely absent. In fact, Neimyer claimed that tuberculosis followed instead of preceded these hemorrhagic attacks. Hemorrhagic sputum is the exception in early tuberculosis; it may be mucopurulent, slightly tinged with blood, later of a greyish yellow or of a boiled rice appearance.

A heart beat constantly above 90, with occasional attacks of dyspnea and palpitation are exceedingly suspicious symptoms of tuberculosis.

The family history should be investigated carefully, not only as to lung tuberculosis in the immediate family, but also in uncles, aunts and grandparents. Such other tuberculosis diseases must be inquired about as "white swelling," spinal or other bone

disease that may be due to tubercle bacilli. It must be remembered that patients do not inherit tuberculosis, but simply a decreased resistance to it.

The increased susceptibility to tuberculosis is not rarely inherited from our ancestors, who were tuberculous, but any malady that might have lessened the resistance of the mother during gestation, and lactation, thus producing a lessened amount of nutrition to the mother and likewise to the developing fetus, which lessens its vitality and resisting powers materially. The condition can be acquired by sedentary and unhygienic living at home, in the office and through dissipation.

Again, while we do not consider that we inherit the tuberculosis, we do certainly inherit the soil in which it rapidly develops, so the early symptoms of tuberculosis would count for much more provided the mother or father had suffered from tuberculous disease.

Given: A man who has inherited this lessened resistance would never develop the disease until exposed to infection by the specific organism. We think we are thus exposed in our cities and hospitals almost daily, but, of course, not so in the country. If such a patient live in a house where there lived, or had lived a case of inherited tuberculosis, coughing and spitting millions of bacilli daily, he might inhale the dust, ladened with bacilli, or eat the food that had been infected by house flies that had walked over infected sputum or feces.

Cases presenting any of the above symptoms would be considered more suspicious if they had been living in premises occupied by tuberculous subjects, or had been nursing or attending patients suffering from this disorder.

When a history of consumption is obtained in a family, it should always be ascertained if the patient ever lived in the house occupied by a consumptive relative. Remember, he gets the tendency from his relatives, but may get infected from any tuberculous patient.

We like to think that no amount of infection will cause the disease unless there is previously lessened resistance, but as a matter of fact this is not the case. After sufficient exposure to the bacilli almost any person will fall a victim.

The microscope is here a very valuable diagnostic agent when positive, but not to be relied upon for a negative opinion.

Just as the most reliable diagnosis of malaria is made with the microscope, though in rare instances, cases dies of malaria before the parasites can be found in the blood, so the tubercle bacilli may not be found in the sputum until the case is well advanced.

We should lay stress on two special points here. One is the importance of a very thorough search for the bacilli by one who will take the time to look over several slides; and the other is, that if the sputum is kept in a warm, even temperature, or better, in an incubator for a day or two, the bacilli multiply and may be found with ease in a specimen which was previously found negative.

Pain. The pain incident to early tubercular deposit depends largely upon the extent to which the pleura is involved, as this is its source of origin in the great majority of cases. In fact, pain is not at all a constant symptom, and will not do to rely upon, as perhaps three-fourths of the tubercular conditions begin either by hemorrhage, fevers, slight cough, which is not usually attended with any pains, or if pain is present, it is as likely as not to be of rheumatic or neuralgic origin. But, if after deep breathing following an ordinary case of pleurisy, either with effusion or the dry variety, we may have pleurodynia, which is one of the early symptoms of the trouble.

Cough There is cough in the early morning, after which there is scarcely any more trouble from the 'cough' during the day unless the tuberculosis be complicated with intercurrent bronchitis. Cough is usually dry and hacking in the beginning, with hoarse voice when the larynx is involved. In some cases the cough symptom is more prominent when first retiring, owing to the chill of the cold sheets and occasionally after meals, particularly if the digestion is bad, the cough is often attended with vomiting and loss of food.

As said before, in the above conditions, with less than $2\frac{1}{2}$ inches of expansion, slight dullness on percussion, increased vocal fremitus, pleuritic friction sounds, vesicular breathing increased, normal ratio of inspiration and expiration changed, the injection of Koch's tuberculin in a case presenting the above symptoms is more than likely to bring about a positive reaction in fever which would settle the diagnosis

In healed and incapsulated lesions, and in those cases with far

advanced processes, you will fail to get a tuberculin reaction. Tuberculin should never be given to patients with fever, nor to those where a previously active process has recently become latent.

TREATMENT: Prophylaxis—There is no disease in which prophylaxis may accomplish such brilliant results as in phthisis pulmonalis.

Given: A child who inherits the tendency or soil to tuberculosis, then add to this, lessened resistance, an atmosphere and premises in which millions of bacilli are being expectorated and desiccated daily, and there is not one chance in a thousand for said child to escape infection.

Take the same infant as soon as born, even of tuberculous parents, and remove it to proper environments, and its chance for growing up healthy are increased a hundred fold. This proposition opens up the best opportunity for prophylaxis in thus removing, as nearly as possible, children from tuberculous environments, to relatives who are better situated to care for the rearing of the child, and, where at least, the constantly infected atmosphere is not present.

Isolation should be the rule wherever it is possible to enforce it. It has been a mooted question as to whether tuberculosis could be acquired through the stomach, as by the eating of tuberculous food. Its general entrance into the system is supposed to be through the air passages, particularly through inflamed tonsils or ulcerations in the naso-pharynx. This latter mode of infection being the accepted general method, it behooves the sanitarian to see that all tuberculous sputum is expectorated only in sputum cups, which should be burned or otherwise disposed of daily. It is no hardship to the consumptive to thus protect his own family, and the public, from the risk of infection through dried expectoration.

It is our judgment that cases of phthisis should be reported to the boards of health just the same as any other infectious disease, and that such houses and rooms as have been occupied by tubercular subjects should be subjected to the most rigid sanitary cleaning before the premises are occupied by the next tenant. It is only by compulsory registration of houses and cases that strangers can protect themselves, by looking up the record when moving into a new community.

Not only school teachers should be examined for tuberculosis, but the pupils as well by the most searching investigation. A positive diagnosis should excuse any such child or teacher from further connection with the school. Popular lectures, sermons and newspaper editorials should bring the public into such intimate knowledge of prevention, that the spread of the great White Plague would become much less by popularizing this preventive information.

Non-grafting government inspectors should make constant examinations of all dairies and slaughter houses, in order that the purest milk and meat should enter into our food products. Tenement houses should not be so crowded and ill-ventilated as to form actual incubators for the tubercle bacilli to which they are often subjected.

Climate. So much has been said about open-air climate treatment of tuberculosis, that it is impossible to add anything that has not, perhaps, already been better said. It is a known fact that the tubercle bacillus succumbs very readily to free exposure to sunlight, regardless of the temperature. It is known to thrive best in dark, ill-ventilated rooms, where squalor and poverty run riot. The open air treatment was a natural conclusion as the very antithesis of the above mentioned conditions, and it has been so successfully carried out through sanatoriums and tents in various colonies in the United States and Europe, that it is no longer a theory, but a demonstrated fact, that a large percentage of incipient cases treated in the sunshine with forced feeding really get rid of the tubercular process, and remain well so long as they conform to the conditions which brought about their cure.

The tubercle and leprosy bacilli are so closely related in morphology, that they are exceedingly hard to distinguish one from the other; recent experiments in treatment in the Louisiana Leprosy Home has proven that sunlight and fresh air is just as efficacious in the latter as in the former disease.

Again, we have the beneficial effects of light illustrated in the treatment of lupus exudens by the X-ray, which is decidedly the most successful method of treatment applied to that very loathsome disease.

It is our judgment that the climate which furnishes the largest percentage of sunshine with the least amount of air pollution is

the best place for the infected subject to permanently improve. As a matter of course, such climate should be mild in order that the greater part of the nights, as well as the day, can be spent in the open air.

We incline to the belief that some cases, at least, do as well in a humid atmosphere as in the higher, dryer, and dustier places.

To illustrate: At Covington, La., in the pine belt of the Florida Parishes, there is a health resort to which consumptives have been migrating for the past half century, with perhaps as much benefit as to those who have been going to the drier Western and more elevated Northern resorts for the treatment of this disorder. To patients with neurasthenic habits and accelerated heart beats, where higher altitudes have increased insomnia and pulse rate, we would most strongly commend the pine belt in Southern Mississippi, Georgia and Louisiana, and from what we have seen, results that have been equal to any obtained in other localities.

No one climate or place is suitable for all cases, and to many who do badly near salt air and much humidity, are rapidly improved by removing to some higher, drier altitude as Silver City, Albuquerque, Las Cruces (New Mexico) and El Paso (Texas).

It is said that in some of these places germ life is so negative that the carcasses of dead animals actually dry out in the open air without any decomposition whatsoever; in other words, they furnish from 60 to 75 per cent. of sunshine and equitable climate with no very sudden changes. A limited amount of rainfall, and to many these conditions have proven the advisability of at least a two years' residence in the dry climate. Tent life here is practiced both summer and winter, and as it is the open air that is the great force requisite, the tent life under the proper direction of some medical man is, perhaps, as advantageous as the regular sanatorium's treatment in the Adirondacks and other places. Any one pursuing this open air method of treatment during cold nights, should have stove, woollen underwear and blankets to protect the surface from chilling, as it does not seem to matter how cold the inspired air is, provided the body temperature is kept up.

In order to carry out the forced feeding, which is one of the methods in the Las Cruces treatment, it becomes necessary to take a moderate amount of exercise, just short of fatigue, in order to

spur the appetite to that degree of acuteness that will call for three or four hearty meals daily, provided digestion is normal; in other words, the patient should consume food, and throw up barriers of phagocytosis faster than the germs of tubercle bacilli can consume the affected lung.

The proper kind of diet, it should be left largely to the patient's taste, and his ability to handle a particular kind of food for which he has a preference.

Ordinarily, foods richest in carbohydrates are the best fat producers. When, however, they disagree with the stomach, as is often the case, other suitable food must be given the preference. The globule of cod liver oil and sweet cream can hardly be distinguished under the microscope, and yet, to the consumptive's palate what a difference. It has been our rule, that whenever the various emulsions of cod liver oil and other fats disagreed with our patients, to resort at once to a forced feeding with rich milk or cream, with perhaps as beneficial result as were ever obtained from the administration of cod liver oil.

If lung gymnastics were practiced daily by deep abdominal breathing, with mouth open for a limited space of time, three or four times daily, we would have the same proportionate ratio of development in elasticity of the air cells and lung tissue, that we see in the great right arm of the blacksmith, who constantly swings his hammer until his right measures one third more than the left.

In persons subject to hemoptysis, this exercise should be commenced very gradually, but to the average compressed, bound down lung it has a most beneficial result in the great majority of cases.

The drug treatment of phthisis pulmonalis is largely a matter of meeting special symptoms as they arise, but the object of this paper does not embrace the symptoms of advanced phthisis; we shall not dwell upon that phase of the subject except to say, that in incipient phthisis it is our judgment that we have very much more to gain by forced feeding, pulmonary gymnastics, and open air sleeping and exercise than we possibly can from the most scientific administration of drugs without these hygienic and other aids. We do not mean to be therapeutic nihilists, for there are many valuable drugs to at least alleviate many of the symptoms of advanced phthisis, but, as said before, the object of this paper

is to urge upon practitioners the early diagnosis and prompt removal of incipient tuberculosis patients to such climatic environments as are best suited to them, as their only chance of recovery depends upon the early diagnosis and treatment.

In the successful management of tuberculosis, it is absolutely necessary to lay aside the daily vocation, in order that you may have absolute rest of the mind, body and nervous system. This is necessary in order that all energy may be devoted to tissue building, and in combating the effects of the toxins. It is especially to be desired in those cases who are running a high temperature, and it is necessary to place them at complete or cadaveric rest, with forced feeding. In cases of this type, the carbohydrates must be withheld because they are producers of heat. In the meantime the albuminous food must be increased and forced to their fullest capacity, with little regard for the temperature. The enforced *rest* and *feeding* must be supplemented by continuously remaining in the open air. This is absolutely essential to any success, so far as acquiring a clinical cure is concerned. It means a hard fight from the beginning, and it cannot be entered into with faint-heartedness, and be crowned with success. It is a battle worth fighting, and the fight must be made from the very beginning. It must be continuous and reinforced by patience, fortitude and constant watchfulness. Self must be conquered, and reconciled to a long and sacrificing conflict.

To remain in the fresh air must be the constant vigil of him who is determined to get well. And by fresh air we do not mean to sit in the room with a door and window open. It means to be out of doors completely, where there is no obstruction between you and the greatest curative agent that has yet been discovered, and one we have in the greatest abundance, the only expense being that of the effort it takes to get it. Reading, writing, and all forms of amusement can be done outside as easily as it can be done inside, and the house should be avoided except as a resort of necessity.

We should sleep in the open air either on a closed or screened porch; in a tent that is open on the sides, or if either of these conditions are impossible, then every door and window should be opened.

This is one of the great advantages of the western arid climate. Here we have rain seldom, and you can sleep out in the patios and never think of, or fear being disturbed by rain or dews. You have a climate that renders it possible to remain out of doors in the open the greatest possible time, and here lies the secret of success of the great number of arrests and clinical cures that we can claim.

The question of exercise is one of great importance, because it comes in for its share in conducting the case to a successful termination. It must be complete, as said before, and be disassociated from all worries. No exercise is to be indulged in where there is any temperature, or any of the vasomotor disturbances produced by toxins.

It is never wise to tell a patient with fever to get a horse and rough it on a ranch, as so many are instructed to do before they are sent from their homes to the West. Such advice means either death earlier than it would otherwise, or else means their becoming chronic cases in which a clinical cure is a remote possibility.

DISCUSSION.

DR. RICHARDS felt a great interest in the paper which had just been read, because it had been written in collaboration with Dr. Troy Sexton, who was a personal friend of the speaker. They were both internes in the Charity Hospital together, and he remembered well that at that time Dr. Troy Sexton had a slight consolidation at one of the apices, and had been warned of the danger of same. He had been very sorry to hear, a few years later, that the Doctor had developed phthisis pulmonalis and had gone out West.

One point which has been greatly neglected in our study and investigation of phthisis pulmonalis, is the question of infected houses. He knew of one house, owned by a physician, which was thus infected, and had been for forty years. Several persons who had lived there died of phthisis, and every one of the members, with the exception of two of the family now living in that house, developed pulmonary tuberculosis. He knows many old houses in the third district which are infected with both tubercle bacilli and cancer.

With regard to the benefits of high altitudes, Prof. August

Bier, of Kiel, gives the following explanation of their curative action in pulmonary tuberculosis: "All high altitudes cause increased hyperemia of the lungs, and all hyperemias cause increased phagocytosis, nature's best cure in infectious diseases." Dr. Bier is the first to offer any explanation of the beneficial results obtained by high altitudes.

DR. KOHNKE: Tuberculosis is unquestionably an infectious disease, and disinfection should be recommended, encouraged and practiced. That a house should have been infected for forty years is the fault of the physicians who knew of the infection and did not seek to have it removed. The same can be said of cancer houses. He thought it the physician's duty, in every instance, to tell not only the family, but the patient, the exact nature of the disease and the means necessary for the prevention of the infection of other members of the household. It is the duty of our profession to humanity to practice preventive as well as curative medicine.

DR. GESSNER asked Dr. Kohnke what would be the proper manner of disinfecting a house under those circumstances.

DR. KOHNKE: Our practice is to wash all surfaces that can be without injury so treated, with a solution of bichloride of mercury, 1 to 500; to destroy by burning the trash and litter of the room, and lastly to fumigate with formaldehyde gas. This gas is the best disinfectant for germs, sulphur being better for the destruction of insects. On being asked how often disinfection is practiced for each case the Doctor replied that it was done once only, and repeated as often as reinfection occurred.

DR. SEXTON, in closing, said he was certain there were a large number of houses in this city which were infected with the tubercle bacilli. Former tenants, suffering with pulmonary tuberculosis, expectorate about the premises, the dust and house become infected by millions of bacilli, and new tenants, who are pre-disposed, can certainly contract the disease.

He had been informed that several Sisters of Charity had been buried from one cloister in a short space of time; all had died with pulmonary tuberculosis by direct infection from nursing and living in infected rooms.

Physicians should report tuberculous cases just as any other infectious disease, and the Board of Health would willingly dis-

infect free of cost all such premises, as a protection to other members of the family, and more particularly to protect subsequent tenants, as no innocent third party should be subjected to such risk of infection. A rule like this thoroughly carried out would stop one of the most prevalent sources of the spread of infection.

DR. C. W. ALLEN read a paper entitled

Report of Two Cases of Gonorrheal Arthritis, Treated by Bier Hyperemia.

Having had very satisfactory experience with the Bier hyperemia in all cases in which I have used it during the past year, and realizing in it a great adjunct to our armamentarium, I beg to report the two following cases, hoping they may prove of interest.

CASE I. W. I., *Aet.* 30—Consulted me Jan. 4 of this year. Had a chronic urethral discharge for about 7 or 8 months. Sometime before Christmas indulged in a suspicious coitus and either aggravated his condition or acquired a fresh infection, four or six days later developing a copious discharge.

December 21, while attending to business on the streets, his right knee became very painful on motion, and he had developed a decided limp by evening; that night the pain became very severe, accompanied by swelling and fever; a physician in attendance made a diagnosis of rheumatism.

After several days of treatment, no results having been obtained, and pain and swelling appearing in the elbow, the attendant upon further questioning developed the fact, previously overlooked, that the patient had a profuse urethral discharge and appropriate treatment was instituted.

This was followed by much benefit, the pain in the elbow disappearing and the knee improving. A few days later he was able to get around with the aid of a stick, and a tight bandage on his knee; but would have acute exacerbations of pain every two or three days.

He left his doctor, as he would not take the rest prescribed, and limped into my office on the date named.

He told me he could take no treatment that would entail any

confinement. I examined his knee and found it slightly swollen and reddened, with considerable pain on pressure or movement.

I applied a Martin rubber bandage above the knee, reapplying it several times until I produced the desired amount of hyperemia. I had the patient remain in the waiting room for some time to learn the effect of the stasis upon the pain, as well as to learn how he stood it. When he left there was some improvement in the pain, and he could use the joint with somewhat more ease. I instructed him that if the bandage did not disturb him not to remove it until the following morning, then to massage the knee. He returned next day for a reapplication of the bandage, and reported having been much relieved while the bandage was on, but the pain returned as usual next day when he removed it.

It was reapplied again in the same way.

The relief was more pronounced and more lasting this time, but he complained of the swelling in his foot and ankle, produced by the bandage interfering with his shoe.

This was remedied by first applying a roller bandage to the foot and leg almost to the knee, and then applying the rubber bandage above the knee.

This treatment was kept up daily. Sometimes he would have to remove the bandage at bedtime, as it annoyed him, but frequently he slept with it on; as the bandage was always applied about noon, the duration of application can be readily estimated.

After about nine days the knee ceased to give trouble, even when the bandage was off, but the treatment was kept up in all about fourteen days. During this time the necessary attention was given to his urethra.

CASE II.—H. L. *Aet.* 23. Gonorrhea for three weeks, when his left wrist and 2d and 3d metacarpo-phalangeal joints began to swell and become painful, this had lasted for several weeks, when I first saw him March 23; he had had the arm splinted and had been using salicylate, but with almost negative results. His wrist and hand were much swollen and painful, and almost helpless, though he had been using it some in driving, which was his occupation. I at once applied a rubber bandage which I have learned to keep handy. It was applied midway between the wrist and elbow. The course of treatment and his experiences were nearly

the same as in the first case, using the bandage in all about ten days, working with the hand all the time.

These cases were both mild and cleared up in a very short time, with only the Bier treatment. It is, however, not uncommon to see cases no worse than these drag on for many weeks under other forms of treatment, becoming very discouraging to the physician as well as the patient, sometimes, at least, the more serious cases ending in a permanently stiff joint.

The Bier treatment by any of the three methods, while having a few fundamental rules necessary to follow, is, after all, very simple and applicable to a multitude of afflictions. Of the three methods, that by constriction, such as I used in the cases reported, is the most generally useful, and I do not think any physician or surgeon should neglect an opportunity to learn its application and perfect himself in its technic.

While not bearing on the above cases or on the Bier treatment, I would like to call attention to two other uses that I have put the rubber bandage to that have proved very satisfactory. In cases where pressure is desired, the rubber bandage meets this condition admirably. In inguinal adenitis, applied as a spica to the groin, more pressure can be applied and more comfortably borne than by any other method I know of; the same way in hydropo-articuli.

Again, in orchitis or epididymitis, a rubber bandage is more easily applied and far more effective than strapping with adhesive plaster. No shaving is necessary, there is no sticking to the skin; the pressure is always uniform, and adapts itself to the parts as they diminish in size, and not getting slack as with adhesive plaster. When applied in these cases a small piece of sticking plaster placed across the end of the bandage prevents slipping.

DISCUSSION.

DR. McILHENNY: In cases that will be benefited by Bier's passive hyperemia, the pain is markedly diminished after the constriction has been applied from one half hour to an hour; the congestion possessing anodyne properties. If the pain is in no way diminished, or is increased, this treatment is counterindicated; that is, provided the bandage has been properly applied. Pain continues to be diminished as long as the bandage is on, and in

many cases does not return until an hour after it has been removed. Edema is noticeable about two hours after the application, and the local temperature is increased from one-half to two degrees. In cases of epididymitis, Bier first straps the testicle and then applies his rubber bandage. After a bandage has been applied for ten hours or longer, the oedema will be marked, and before the second application, should be energetically massaged away, otherwise it loses the absorbing or dissolving properties claimed for it. Merely rubbing is not sufficient, nor can a patient do the massage properly. In cases of ankylosis, Bier claims that the hyperemia brought about by his vacuum cylinders, is both active and passive, and has a different action from the active, or hot air hyperemia, and the passive, or hyperemia, caused by the application of a bandage, being a combination of the active and passive hyperemia. By this means the serum is increased in the joint, and, he thinks, absorbes tissues which tend to limit joint motion.

DR. RICHARDS: Employs passive hyperemia extensively in Ward 7, at the Charity Hospital. One case of fracture of the middle third of the thigh, in which the hyperemia method has been employed; the patient was able to walk around in three weeks, when the plaster cast was removed. Also had made use of it in rheumatic arthritis, with splendid results. The pain was relieved in about one hour. Salicylates had failed to give any immediate results in that case.

He had recently had under treatment seven cases of ununited fractures, five in hospital and two in private practice. All of these cases were treated by injecting blood (Bier's method) between the non-united fragments and then applying a constrictor for from two to three hours; in every instance, as shown by the X-ray, the callous was greatly improved and in one case in particular, which had resisted various forms of treatment for weeks, a very strong callous resulted two weeks after the blood injection and hyperemia treatment.

DR. GUTHRIE related very interesting experiments made with rabbits that had been injected with serum obtained from the limb of a patient suffering with a large phlegmon, and who had been subjected to the Bier method.

DR. McILHENNY: Dr. Calle demonstrated that the serum has

germicidal properties by taking serum from the arm from which he had obtained pus from an empyemic elbow, after making cultures he added the serum from the diseased arm and injected this into mice, none of which died, whereas pus treated with serum from the healthy arm and injected into mice killed them all.

I mentioned this in a paper I read before the Society some weeks ago.

DR. ALLEN, in closing: Prof. Bier states that stasis hyperemia will accomplish practically all that hot air will do in most cases, and considers it the most generally useful of all forms of hyperemia. It is, besides, much easier applied, pleasanter to the patient, requires less of the medical attendant's supervision, and requires no expensive apparatus, and does not confine the patient during its application.

Dr. Allen stated he had had ankylosis from disuse and immobility which had proved stubborn under other treatment, improve rapidly under stasis hyperemia. One case of acute articular rheumatism was up and about in eleven days; he must add, however, that the case would probably not have been a severe one, as temperature at no time was over 102° F., and besides the stasis hyperemia aspirin was used freely.

The serum produced about a diseased part by stasis hyperemia has both a softening, dissolving effect upon inflammatory exudates and adhesions as well as being bactericidal or stimulating phagocytosis.

He must congratulate Dr. W. T. Richards upon the splendid results he had seen accomplished in his service.

N. O. Medical and Surgical Journal

Editorial Department.

CHAS. CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

Medical License Reciprocity.

Another wave of discussion regarding medical licenses has spread over the country. This was occasioned in large degree by a paper read by the secretary of the Illinois State Board of Health before the Illinois State Medical Society in May. The question is one of general interest and a universal reciprocity of medical licenses is a thing to be desired. The elemental consideration, however, seems to depend upon the question of the individual state requirement, and until a common basis is established the general practice of reciprocity. cannot prevail.

It is interesting to note the progress along this line, however, during the past four or five years. There is no doubt that the Confederation of State Medical Examining Boards has accomplished a great deal towards the desired end. One State after another has legislated until now nearly three-fourths of the States of the Union have some law requiring a form of examination before licensure. It is true that some of these are merely *pro forma*, but the tendency is to a higher standard of qualification for those intending to practice medicine. Medical schools themselves are making the road more difficult from year to year, while they add to the opportunities for medical education, and a survey of the reports of the examination of candidates in States with high standard of requirement show that the failure can be traced to lack of education at institutions of inferior standing.

The attainment of the desired end of a general reciprocity in this country must be arrived at gradually for the reason that until the last decade no attempt has been made to fix a standard for medical schools. Prior to this time the country was filled with medical

schools having very little standard and with the principal object of graduating a multitude of doctors irrespective of training. As a consequence a large proportion of men engaged in the practice of medicine lacked the qualities and qualifications to meet any sort of a standard which might be raised. With the gradual enactment of proper legislation in one State after another, a certain exemption obtained for those in practice at the time such laws became active. Now, some of the chief objections to the restraint placed upon wholesale reciprocity through strict requirements seems to come from practitioners who have never qualified under a State examination. The *Medical Record*, of July 28, comments pointedly on this in stating that such practitioner is barred from practice in States of high requirement except after an examination in his own State, if of equal standard, or in the State to which he wishes to migrate. "This may work a hardship in individual cases," says the *Record*, "but so do many laws which are enacted for the good of the community and not for the benefit of the individual."

The State of Illinois allows 5% for each five years the candidate has been in active practice, the requirement being 75%. This seems a good rule and qualifies the requirement of examinations so as to allow a man of advanced age to change his location should his health or necessity compel.

All forces in medical education in this country are working to the common end of an advanced standard, and it is only a question of time when all medical schools will graduate students of superior education. It is a matter of comment now that most of the medical schools show an attendance of students with a better preliminary education than was the case some years back. In fact, in most schools this is a requirement, while it is also a fact that the selection of medicine as a vocation is more and more becoming one of higher education where formerly it often happened that the practice of medicine was selected because of the easy road and the subsequent dignity and possible emolument which might follow.

The State of Louisiana has been slow to consider any idea of reciprocity, but we believe it is now time for the profession, through its representative body, to take up this matter with a view to establishing a standard of professional interchange which may be in keeping with its already high standard of State requirement.

Medical Representation on the Tulane Board.

At frequent intervals during several years past the agitation of a more liberal policy of representation on the Tulane Board has arisen. This resulted, first, in the recognition of the Tulane Alumni Association and in the appointment of two of its representative members, comparatively recent graduates of the University. In spite of the earnest demand of the medical profession, no heed was paid, but we are glad to note the fact that during the past month the profession has been recognized in the election of Dr. Frederick W. Parham as one of the administrators.

This appointment will meet the approbation of the medical profession in more ways than one. In the first place, it is the acknowledgment of the importance of having a medical member on this Board in the interest of the profession generally, and of the department of the University which for a great many years has been the most important. In the second place, the selection made by the Board is one which could not be improved upon by the profession itself, for in Dr. Parham medical men in this State and elsewhere recognize a man who is conscientious to any trust imposed upon him, of high professional attainment and keen to appreciate the needs of medical education. In honoring the profession by this appointment, the Board has honored itself.

Abstracts, Extracts and Miscellany.

Department of Surgery.

In Charge of DR. F. W. PARHAM, Assisted by DR. F. LARUE, New Orleans.

INSTRUMENTS, TECHNIC AND RESULTS OF EPIDURAL INJECTION.—Dr. Maximilian Hirsch, of Vienna, describes in "*Zentralblatt für Chirurgie*," May 26, 1906, the method and results of epidural injections as introduced by Cathelin in the year 1901. It consists in introducing certain medicated fluids into the epidural space, that is into the space between the dura mater and the internal periosteum of the spinal canal. This space exists by reason of

the fact that the dura ends at the level of the second sacral vertebra, and the region of the sacral canal shows a widening out into the ampulla of the epidural space which is easily accessible through the sacral hiatus.

The indications of the method rest upon three demonstrated facts: 1st. The injections act analgesically; 2nd, the epidural route may be used as a way of absorption for medicaments, e. g., injection of iodoform emulsion in caries of the vertebræ, etc. But the most useful indication is the 3rd, viz., in the treatment of essential enuresis and bladder irritation. The technic of the injection is as follows: Patient is placed on the left side with the lower extremities drawn up on to the body. In order to find the sacral hiatus the index finger of the left hand is made to follow down the sacral spines until the finger finally falls into a small triangle to the side of a hollow bounded by two bony processes. This is the hiatus. Whilst the finger now marks this point the needle is passed perpendicularly through the obturating membrane of the hiatus, that is, at an angle somewhat less than 45 degrees to the body's vertical line. The sensation of having perforated the membrane is quite distinct. In order to be able to push the needle further up in the canal the direction must be so changed as to correspond to that part of the sacral canal which is reached by the depressing of the needle. The needle is now pushed in the second direction slowly and exactly in the middle line. The syringe is now attached and the fluid injected. As injection fluid Hirsch uses the following: *Natrii chlorati* 0.2, *cocaini hydrochlorici* 0.01, *aquæ destillatæ sterilisatæ* 100.0. Of these he injects in adults 10 to 20 grams, for children 5 to 15 grams, warm. He is not satisfied with one injection, but gives at least three injections at intervals of from two to three days, and when the result is not satisfactory he employs the injections again later, according to need. His results are collected from the observation of thirty cases from von Mosetig's service. Of these 80% were permanently cured, 13% improved, and 7% unimproved. The judgment of the results is made more difficult because enuresis has no single distinct pathological and clinical entity. This much is certain, that the longer the trouble has existed, the more unsatisfactory are, in general, the results of treatment. This observation, taken in connection with

the fact that this method is quite simple and without any danger, encourages one to make a trial of it. The objection has been made that epidural injections act by suggestion, but Hirsch opposes this view since he has observed distinct effects in the form of considerable hyperemia of the vesical trigone.

INTERVENTION IN WOUNDS OF THE LUNG.—A résumé of the discussion before the Société de Chirurgie (May 30, 1906), in which took part Messrs. Tuffier, Delorme, Guinard, Delbet and Michaux, revealed the consensus of opinion in the treatment of such wounds. Wounds of the lung generally heal kindly, the all-important being an aseptic occlusion of the wound with immobilization of the chest. Should hemothorax develop later, a free pleural incision is usually followed by a rapid recovery.

Early or immediate intervention, consisting in making a sufficiently large trap door (osteoplastic flap) should be resorted to only when the signs of internal hemorrhage are alarming.

Delbet and Michaux laid stress on certain clinical and practical points; the former in stating that not infrequently patients, with a wounded lung and presenting threatening and dangerous signs, recover without intervention.

The latter (Michaux), like Delorme, advises close observation of the wounded with surgical abstention, which is usually crowned with success. However, when the pulmonary hilum is probably injured, the heart itself or the internal mammary artery, then one is justified in operating.

Department of Obstetrics and Gynecology.

In Charge of Dr. P. MICHINARD and Dr. C. J. MILLER, of New Orleans.

THE OPERATIVE TREATMENT OF PUERPERAL PERITONITIS AND PYEMIAS (G. Leopold. *Archiv. für Gynäkologie*.)—The author reports a series of 11 cases in which puerperal peritonitis was treated by laparotomy in the Dresden clinic. The series dates from 1899. The cases are considered under the following heads: Acute general peritonitis, local circumscribed peritonitis and pyemia of

the pelvic veins. There are five cases in the first group of acute generalized peritonitis. Of these the gonococcus was the undoubted aetiological factor in the first case, apparently the cause in the second case, possibly the cause in another case which presented a gonorrheal salpingitis and ovaritis, although the diplococcus could not be obtained from the secretion. The fourth case followed a criminal abortion and the fifth case delivery by forceps after dilatation of the os by a Bossi dilator, the obstruction to birth being a carcinoma which lay between the uterus and rectum. No record of bacteriological examination of the exudate in the abdominal cavity is given in these two cases. Three of the five recovered, two died; both of the deaths occurring in cases probably of gonorrheal origin, operated on the fourth and sixth days, of grave symptoms. The case of metrophlebitis purulenta puerperalis, discussed as the third group, and operated as a last resort on the sixteenth day of alarming symptoms, also resulted fatally. Coverslip preparations from abscesses about the tubes showed the streptococcus.

Prof. Leopold believes the three fatalities resulted because operation was too long delayed. He emphasizes the importance of prompt and early operation. When a case presents high fever, the pulse becomes smaller in tone and more rapid in rate, the abdomen is progressively more tender and distended, hiccough and vomiting appear, dullness can be percussed in the abdomen, extending well up into the hypochondria, and the skin and face show profound infection, a laparotomy can be productive only of good.

The time has then passed for treatment with ice and opium, antistreptococcic serum and collargol injections. Free drainage and counter drainage should be attempted, not only from the pouch of Douglas through the vagina, but, in the hypochondriac regions as well. The author advocates not only rinsing of the abdominal viscera with normal saline at the time of operation, but on succeeding days he also washes out the draining areas in the same manner, hoping to prevent secondary infection. The five cases of circumscribed peritonitis all recovered following operation, performed between the nineteenth and forty-ninth days of the puerperium. Some of the cases presented suppurating adnexa as the focus, while three cases were found to be uterine abscesses. Leopold believes that the focus of inflammation should be removed

whenever possible, although individual conditions must modify the method of procedure. Several operations may be necessary to discover and remove the primary focus, and one must bear in mind that the most complicated cases may be straightened out by careful technic.—*Surg. Gynec. and Obst.*

Department of Therapeutics and Pharmacology.

In Charge of DR. J. A. STORCK and DR. J. T. HALSEY, New Orleans.

A RAPID CURE FOR LUMBAGO.—In a letter to the *British Medical Journal* of March 3, 1906, Farquhar makes the following remarks: He quite agrees to the value of unguentum antimonii tartaratum in the treatment of lumbago, as Dr. Kenyon pointed out in the *British Medical Journal* of January 13, and has used it successfully for many years, having first got the hint in the sixties from an article in *Braithwaite's Retrospect* in connection with its often marvelous effects in relieving children's chest affections associated with persistent cough; but here there must be no rubbing in, only spread on lint and hung round the neck with a jaconet or oiled silk covering to hinder the ointment from soaking into the clothing, and suspended when pustulation is established.

A little fresh ointment should be spread on the lint daily until the above effect is produced.

In this connection it may also be mentioned that croton oil liniment used in a similar way will often succeed as well if not better, especially in cases of chronic sciatica and allied disorders in the hip region, and in such thorough rubbing in has much to do with the success of the remedy.

Of course it must be remembered that the affection will return after a time, but whoever has employed croton oil liniment after this fashion in arthritic cases carefully chosen has found a remedy that seldom fails to greatly relieve the stiffness and gnawing pains characteristic of these rheumatic disorders.—*The Therapeutic Gazette*.
(J. A. S.)

SALICYLATES MODIFIED BY SODIUM BICARBONATE.—Muller (*Therapie der Gegenwart*, April) has investigated the claim of Frey that by simultaneously giving sodium bicarbonate enough to

keep the urine negative, it is possible to give large doses of salicylates without causing any kidney irritation. His investigation was conducted with fifteen patients mostly arthritic. His experience does not permit him to express any positive opinion. He sums up as follows: "By giving alkalies we are not able to entirely prevent the development of kidney irritation due to the salicylates, but apparently this irritation occurs to a less extent if the alkalies also are given than if the salicylates alone are administered. He advises that patients taking large doses of the salicylates be given enough sodium bicarbonate to alkalinize the urine. [The significance of the appearance of traces of albumen and hyalin casts in the urine of patients taking salicylates has, in the reviewer's opinion, been greatly exaggerated by many clinicians. In his opinion it still remains to be demonstrated that any reasonable amount of salicylates will cause, in a previously healthy kidney, any damage of serious import either immediately or later.—H.]

A POWDER FOR BED-SORES:—

Powdered talc, 2 ounces;
Powdered boric acid, 2 drachms;
Powdered tannic acid, 1 drachm.

Dust over the part affected.

—*La Presse Médicale Belge*, April 1, 1906 (J. A. S.)

APPLICATION FOR PAINFUL AND BLEEDING HEMORRHOIDS:—

Stovaine, 7 grains;
Adrenalin, 1 to 1000, 1 drachm;
Water, 6 drachms.

Moisten a tampon of cotton, apply to the painful part, and cover with a piece of rubber dam;

Or the following suppository may be used:

Stovaine, 1 grain;
Orthoform, $1\frac{1}{2}$ grains;
Adrenalin solution, 1-1000, 4 drops;
Extract belladonna, $\frac{1}{4}$ grain;
Coca butter, 45 grains.

Make into a suppository.—*Ibid*, April 6, 1906. (J. A. S.)

Louisiana State Medical Society Notes.

In Charge of DR. P. L. THIBAUT, Secretary, 141 Elk Place.

NEXT MEETING: NEW ORLEANS, MAY 14, 15, 16, 1907.

OFFICERS—President, Dr. Henry Dickson Bruns, New Orleans; First Vice-President, Dr. Charles McVea, Baton Rouge; Second Vice-President, Dr. George F. Wilson, Bienville; Third Vice-President, Dr. A. J. Perkins, Lake Charles; Secretary, Dr. P. L. Thibaut, New Orleans; Treasurer, Dr. Jules Lazard, 830 Canal Street, New Orleans.

COUNCILLORS—Chairman, Dr. E. J. Graner, 2d Cong. Dist., New Orleans; Secretary, Dr. J. L. Scales, 4th Cong. Dist., Alden Bridge, La.; Dr. P. E. Archinard, 1st Cong. Dist., New Orleans; Dr. J. Wofford Sanders, 3d Cong. Dist., New Iberia, La.; Dr. S. L. White, 5th Cong. Dist., Ruston, La.; Dr. C. M. Sitman, 6th Cong. Dist., Greensburg, La.; Dr. C. A. Gardiner, 7th Cong. Dist., Sunset, La.

MINUTES OF 1906 MEETING.

(Continued from last month.)

THIRD DAY, MORNING SESSION.

Minutes of preceding day read and approved.

The annual report of Treasurer was read by Dr. M. H. McGuire.

NEW ORLEANS, MAY 8, 1906.

Mr. President and Gentlemen:

The reports for the two preceding years have each been incomplete and I had hoped to make this one a complete one. This I am able to do to a much greater extent than last year, but owing to the failure of members to pay their dues within the time specified by the By-Laws (30 days prior to annual meeting), there will, of necessity, be a subsequent report to be made by me before turning over my books to my successor.

According to resolution of this body last year, an expert accountant has examined my accounts from the date of my appointment by Dr. Barrier, 1903, to May, 1906. His detailed statement will be ready for publication in THE JOURNAL along with this report. It will show:

Balance in bank May 6, 1906.....	\$1,624.42
Collected from 717 members for 1906 dues..	2,151.00
Collected from May 5, 1905, to Dec. 31, 1905.	715.85
	<hr/>
	\$4,491.27
By exchange .....	.45
	<hr/>
	\$4,491.72

Expenditures	\$2,731.05
Balance May 7, 1906	1,760.67
	<hr/>
	\$4,491.72

Out of 37 affiliated societies, 23 remitted within the date fixed by our By-Laws, namely: Acadia, Ascension, Assumption, Bienville, Caddo (Shreveport), Catahoula, DeSoto, East Baton Rouge, Feliciana (East and West), Grant, Iberville, Jackson, Lafourche, Morehouse, Orleans, St. John the Baptist, St. Charles, St. Tammany, St. Landry, Tangipahoa, Vernon, Webster, West Baton Rouge and Winn.

The remittances from the remaining 14 came straggling in up to the day before the meeting.

Members at large from unorganized parishes are as follows:

Calcasieu, 4; East Carroll, 1; Iberia, 3; Jefferson, 1; Sabine, 1; Madison, 1; Lafayette, 1; Terrebonne, 1; and from New Mexico, 1—a total of 14.

On December 31, 1905, after verifying our membership list by correspondence with Parish Secretaries, we dropped 124 members, which, subtracted from the total of that time, made 649 members in good standing that date.

Our present roll of 717 paid members will probably be increased to the 800 mark by payments between now and the end of the year.

In this connection I feel that your attention should again be directed to the fact that our yearly expenditures for the last two years have exceeded our income by a little more than \$400, which excess has been paid out of the surplus which remained from the years in which the dues were \$5.00. The per capita expense of our society approximates \$3.50, which, unless reduced by future administration, cannot be met under our present system. The matter of increase in dues, suggested last year, did not meet with approbation; the reduction of expenditures depends upon uncertainty of the economical capacity of an administration changed yearly, so that it appears as if a decided increase in membership is very essential to the financial stability of our organization.

The balance reported on hand, together with the delinquent dues which will be collected before the end of our fiscal year, will just about meet our expenses for the current year.

Another point is the method of auditing the Treasurer's account. There should be a standing Auditing Committee, authorized to employ an expert accountant to do the actual auditing. This would conform to the requirements of the Surety Company that carries the Treasurer's bond.

I want to thank our efficient Assistant Secretary, Mr. George Augustin, for valuable assistance rendered in the work of this office during my incumbency.

Respectfully submitted,

M. H. M'GUIRE, M. D., Treasurer.

REPORT OF EXPERT ACCOUNTANT.

(Appended to Annual Report of Treasurer.)

New Orleans, May 9, 1906.

To the Louisiana State Medical Society.

Gentlemen: As per instructions, I have examined the books and vouchers of your Treasurer, Dr. M. H. McGuire, and submit the report following:

Starting with amount in bank, 6/13/03, I have checked the disbursements through voucher and check books to date, partly from stubs and partly from vouchers, finding only the trifling difference of 20c in operations covering this period. The receipts have also been checked for the same period, June 13, '03, to date, through the ledger.

Membership dues credited to sundry members in ledgers.....	\$7,613.00
Less exchange and collection fees to bank.....	10.30

Net dues	\$7,602.70
Amount to bank, supposed to represent member- ship dues paid, but not properly credited in ledgers	(\$108.00)
Promissory note, collected and deposited.....	169.80

Total receipts, June 13, 1903, to date.....	\$7,880.50
Cash in bank June 13, 1903.....	\$1,366.37
Add deposits from June 13, 1903, to date.....	7,780.50

	\$9,146.87
Less amount paid by checks and vouchers to date.....	7,461.20

Balance in bank this date.....	\$1,685.67
Add cash not deposited	100.00
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Total cash balance.....	\$1,785.67

Respectfully,

F. E. RICHMOND.

Upon motion of DR. ALBERT MEYER the Treasurer's report was received, and Treasurer authorized to make proper entry of 20c shown to be missing.

Medical News Items.

MEETING OF THE MISSISSIPPI VALLEY MEDICAL ASSOCIATION.—The next meeting of the Mississippi Valley Medical Association will be held at Hot Springs, in Arkansas, on November 6, 7 and 8, under the presidency of Dr. J. H. Carstens, of Detroit, Michigan. The annual addresses will be delivered by Dr. Frank Parsons Norbury, Jacksonville, Ill., in Medicine, and by Dr. Florus F. Lawrence, of Columbus, Ohio, in Surgery.

Dr. Norbury has chosen for the subject of his address, "Clinical Psychology," and Dr. Lawrence will discuss in his address, "Surgical Principles and Theories." In addition to these addresses there will be the annual address of the President, Dr. Carstens.

Communications regarding papers should be addressed to the Secretary, Dr. Henry E. Tuley, 111 W. Kentucky Street, Louisville, Ky.

Elaborate arrangements have been made by the local profession of Hot Springs to entertain the visiting doctors and their wives, the meeting being held at one of the largest hotels, which will be specially opened in advance of the season to accommodate the Association. A cordial invitation is extended to every physician in the Valley to attend this meeting, for which a large number of interesting and valuable papers have been promised.

TRI-STATE (ALABAMA, GEORGIA, TENNESSEE) MEDICAL SOCIETY MEETING.—The eighteenth annual meeting of the Tri-State Medi-

cal Society will be held at Chattanooga, October 2-4, 1906. Reduced rates have been obtained from all points in Alabama, Georgia, Tennessee, Mississippi, Louisiana and Florida, and an unusually large attendance is assured.

The preliminary program includes an excellent list of papers from leading medical men of the South. Strong pressure will be brought to bear to ultimately convert this organization into a branch of the A. M. A—The Association of the Southeastern States—and recommendations will be made at this meeting.

Physicians desiring to read papers should send their titles at once to the Secretary, Dr. Raymond Wallace, Chattanooga, Tennessee.

MEETING OF THE AMERICAN INTERNATIONAL CONGRESS ON TUBERCULOSIS.—Their next meeting will be held in New York City on November 14, 15 and 16, 1906. As this Congress aims at representation from the whole of the western continent, it is expected that delegates will be present from both North and South America.

THE TRI-COUNTY MEDICAL SOCIETY OF MISSISSIPPI met in Brookhaven on September 11, and elected Dr. Dudley Jones, of Kentwood, president.

MEETING OF THE NATIONAL MEDICAL ASSOCIATION OF NEGRO PHYSICIANS.—The second annual session of this society was held in Philadelphia, August 21, 22 and 23. The meeting was held in the Odd Fellows' Temple, and some clinics were held in the Douglas Hospital.—Exchange.

THE AMERICAN SURGICAL TRADE ASSOCIATION, at a meeting held in Philadelphia, June, 1906, adopted resolutions that after January 1, 1907, the trade adopt the French Scale for all Catheters, Bougies and Sounds.

PAUL C. H. BROUARDEL, M. D., LL. D., professor of legal medicine at Paris, and one of the most prominent medical men of his time, died at Paris, July 24, aged 69. His works on medico-legal questions have become classics, and as an official delegate to international gatherings and president of innumerable societies and congresses he was a familiar figure. Not unlike Virchow in appearance, his position in France was like Virchow's in Germany

in his pioneer work and leadership. He won equal eminence in forensic medicine and in public hygiene. The legislation of the last twenty-five years in regard to official medicolegal experts and matters affecting the public health was largely due to Brouardel. His wise counsels aided in international sanitary conferences and the more recent international antituberculosis congresses and in matters affecting military hygiene. He presided at the recent antituberculosis congress at Paris. The records of his work and teachings as director of the laboratory at the Paris morgue are as interesting as Poe's stories. Since 1878 he has been one of the editors of the *Ann. d'hygiène publique et de médecine légale*, now in its seventy-eighth year. Almost his last work was the planning of an institute for research on criminal psychology.—Exchange.

A WARNING.—Members of the profession are warned against the operations of one G. E. Simpson, who is fraudulently taking orders for *Surgery, Gynecology and Obstetrics*, published by the Surgical Publishing Company, of Chicago, and under the Managing Editorship of Franklin H. Martin, M. D.

Many doctors have already been victimized by this man to the extent of paying cash for orders for the journal, or giving checks payable to his own order; and this notice is published in the interest of the profession and for the purpose of putting a stop to his further operations.

Secretaries of local medical societies are requested to warn the members of their societies against his operations.

CHICAGO'S HEAT RECORD.—During August there have been 390 deaths in Cook county, Illinois, as against 338 for the preceding month of July, and 356 for the month of April, the next largest month.

The increase in the death rate is attributed to the heat, as is shown in the large number of deaths which have been caused directly or indirectly by heat prostration. There are twenty-seven of these, as against one for the month of July. Suicides also increased with the hot weather. There were thirty-nine during August, more than for any other month, save February, when there were the same number. During August there were twenty-nine drownings; in July there were twenty-eight. Railroads claimed twenty-

six victims, and street cars thirteen. Twenty-four school children are among the victims.—Exchange.

DECISION ON QUACKERY.—Judge St. Paul refused to grant the injunction prohibiting Dr. Leon Williams from continuing to practice in Louisiana. It was claimed that persons using electrical appliances and radium in their treatment of diseases were not required to obtain certificates from the State Allopathic Board of Medical Examiners.

THE HOTEL DIEU TRAINING SCHOOL graduated seven young ladies last month. Dr. E. S. Lewis made the annual address and awarded the diplomas.

THE STATE BOARD OF MEDICAL EXAMINERS will hold its next meeting in this city on October 18 and 19.

NEW MEDICAL AUDITORIUM OF ST. LOUIS MEDICAL SOCIETY.—Dr. T. A. Hopkins, of St. Louis, sent THE JOURNAL the program of the dedication exercises of the New Medical Auditorium at No. 3523 Pine street. The St. Louis Medical Society was incorporated in 1837.

ARRESTED FOR PRACTICING MEDICINE WITHOUT LICENSE.—A man in this city, giving the name of Noyes J. Weeks, was arrested for practicing medicine without a license, and being unable to furnish a bond of \$25.00, he was sent to the Parish Prison.

NEW OFFICES OF THE STATE BOARD OF HEALTH.—The State Board of Health will have its new offices in the Hibernia Bank and Trust Building after the 1st.

PERSONALS: Dr. J. O. Rush, of Mobile, has been appointed Acting Surgeon of the Public Health and Marine Hospital Service.

Dr. W. E. Arnold, Hospital Steward at Jackson Barracks, has been ordered to Washington, D. C.

Dr. H. D. Bruns is among those who are on vacation.

Dr. E. S. Hatch has removed to 733 Camp street.

Dr. M. J. Magruder, of this city, met with a serious loss in the partial burning of his home during the month.

Dr. Paul J. Gelpi is the new Inspector of Communicable Diseases for the City Board of Health.

Miss Anita Clagett has been elected Directress of the Touro Infirmary Training School for Nurses.

Dr. F. A. Larue, Secretary and Treasurer of the Louisiana State Board of Medical Examiners, will be, on and after October 1, 1906, at Room 502 Tulane-Newcomb Building, No. 211 Camp street.

Drs. F. W. Parham and E. D. Martin have leased the property No. 741 Carondelet street, next to the New Orleans Sanitarium, and will fit it up with laboratories and all appliances necessary to do surgical work.

A number of New Orleans physicians spent their vacation, in part, at French Lick Springs: Dr. Gordon King, Dr. J. G. Dempsey, Dr. W. Sexton and Dr. J. M. Batchelor.

Among the physicians on vacation who have returned are Drs. F. A. Larue, W. W. Butterworth, C. A. Gaudet, J. Barnett, S. K. Simon and P. B. Salatich.

Among the doctors who are still on vacation are Dr. Paul L. Reiss, who is in Paris, after an extensive continental trip with his wife; Dr. C. Jeff Miller, spending the month of September in the North; Dr. Frederick W. Parham, who left recently for Manitou, and Dr. L. L. Cazenavette, who is in Chicago on his vacation and, incidentally, is looking up recent progress in electro-therapeutics.

Drs. J. T. Halsey and Roy M. Van Wart attended the meeting of the British Medical Association in Toronto, and Dr. Halsey read a paper.

Dr. W. L. Egan, of Shreveport, has given up general practice and will make a specialty of Ear, Nose and Throat work.

Among the visiting physicians last month were Dr. J. J. Ayo, of Bowie, and Dr. J. Haas, of Opelousas.

Dr. Russell E. Stone, of Amite, La., has located in this city in the Morris Building.

F. C. Godbold, of this city, Secretary of the Louisiana State Board of Pharmacists, has been elected President of the National Association of State Boards of Pharmacy, recently in session at Indianapolis, Ind.

REMOVALS: Dr. J. S. Branch has removed from Pickering to Oakdale, La.; Dr. C. G. Coyle from Minden to Cotton Valley, La.;

Dr. G. E. Cannon from Alexandria, La., to Magnolia, Arkansas; and Dr. W. T. Arnold from Brookland to Bronson, Texas.

MARRIED: On August 22, 1906, Dr. Robert Clyde Lynch was married to Miss Amanda Genin. The couple left for England direct, whence they will tour Europe for several months.

DIED: Dr. L. H. Von Gohren, an old and highly respected citizen of Bay St. Louis, Miss., died at his residence on August 31, 1906.

Dr. J. R. Anders died September 15, at Gloster, Miss. Dr. Anders represented the Mississippi Board of Health when the health officials visited Central America last winter.

OBITUARY NOTICE: We, the undersigned committee, have the painful duty of reporting to the East Baton Rouge Medical Society the death of one of our highly esteemed members, Dr. James W. Dupree, of this city, and we take this opportunity of expressing our great esteem for the deceased, which sentiments we know will be voiced by each and every member of this society.

Dr. Dupree lived a long and useful life. He was past his sixtieth year, and not far from three score years and ten, the allotted time of man's existence on this earth.

We know that Dr. Dupree was not appreciated by the public as he should have been. We well remember, for one of his years, the trying ordeal he passed through during the yellow fever of last year, and his untiring efforts to improve the sanitary condition of our city. He took a strong stand with the physicians of this city at that time, and was always found on the side of science and the public good.

On many scientific points Dr. Dupree stood thoroughly abreast of the time. On the mosquito and its relation to diseases, he was thoroughly posted, making some valuable contributions to this subject.

We recommend that these few words of praise in memory of our departed brother be embodied in the minutes of this meeting, and disposed of as the Society may determine.

(Signed) A. D. SIMMONS,
L. G. STIRLING,
J. A. TUCKER,

Committee.

Publications Received.

LEA BROS. & CO., Philadelphia and New York, 1906.

The Practice of Pediatrics, Edited by Walter Lester Carr, A. M., M. D.

J. B. LIPPINCOTT CO., Philadelphia and London, 1906.

International Clinics. Vol. II, 16th Series.

D. APPLETON & CO., New York and London, 1906.

The Prophylaxis and Treatment of Internal Diseases, by F. Forcheimer, M. D.

YEAR-BOOK PUBLISHERS, Chicago, 1906.

Practical Medicine Series, Edited by Gustavus P. Head, M. D.

Vol. IV.—*Gynecology*; Dudley von Bachellé.

Vol. V.—*Obstetrics*; De Lee-Roehler Stowe.

P. BLAKISTON'S SON & CO., Philadelphia, 1906.

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Elements of General Chemistry With Experiments, by John F. Long. 4th Edition.

MISCELLANEOUS.

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Annual Report of the Bureau of Health for the Philippine Islands. Period from September 1, 1904 to August 31, 1905.

First Annual Report for the Year Ending December 31, 1905, of the American Oncologic Hospital for the Treatment of Cancer and Other Tumors.

Preliminary Program of the Seventh Annual Meeting of the American Roentgen Ray Society.

Modern Phthisio-Genetic and Phthisio-Therapeutic Problems in Historical Illumination, by Prof. E. von Behring.

Facts and Fallacies Concerning Interstate Reciprocity in Medical Licenses, by Dr. James A. Egan, Secretary of the Illinois State Board of Health. (Paper read by invitation before the Illinois State Medical Society at Springfield, May 17, 1906.)

Reprints.

Heredity and Environment As Causes of Delinquency and Crime, by Dr. Donly C. Hawley.

Clinical Significance of Variations of Wrist and Ankle, by Dr. Thos. Dwight.

Choice of Methods in the Treatment of Operable Cases of Cancer, by Dr. G. Betton Massey.

MORTUARY REPORT OF NEW ORLEANS.

(Computed from the Monthly Report of the Board of Health of the City of New Orleans.)

FOR AUGUST, 1906.

CAUSE.	White.	Colored.	Total.
Typhoid Fever.....	9	3	12
Intermittent Fever (Malarial Cachexia)	5	2	7
Smallpox.....	2		2
Measles			
Scarlet Fever.....			
Whooping Cough.....	3		3
Diphtheria and Croup.....			
Influenza			
Cholera Nostras.....			
Pyemia and Septicemia		1	1
Tuberculosis.....	36	42	78
Cancer.....	16	5	21
Rheumatism and Gout	2	1	3
Diabetes	2	1	3
Alcoholism	4		4
Encephalitis and Meningitis.....	9	3	12
Locomotor Ataxia.....	1		1
Congestion, Hemorrhage and Softening of Brain.....	18	7	25
Paralysis	3	1	4
Convulsions of Infants	2	4	6
Other Diseases of Infancy	28	8	36
Tetanus	4	7	11
Other Nervous Diseases	3	1	4
Heart Diseases.....	30	30	60
Bronchitis	3	3	6
Pneumonia and Broncho-Pneumonia.....	7	8	15
Other Respiratory Diseases	4	2	6
Ulcer of Stomach.....	1		1
Other Diseases of the Stomach	1	1	2
Diarrhea, Dysentery and Enteritis.....	39	21	60
Hernia, Intestinal Obstruction.....	5	2	7
Cirrhosis of Liver.....	13	1	14
Other Diseases of the Liver		1	1
Simple Peritonitis	2	2	4
Appendicitis.....	4	1	5
Bright's Disease	23	19	42
Other Genito-Urinary Diseases.....	4	3	7
Puerperal Diseases	4	3	7
Senile Debility.....	16	12	28
Suicide	6	1	7
Injuries.....	27	13	40
All Other Causes.....	18	21	39
TOTAL.....	354	230	584

Still-born Children—White, 24; colored, 19; total, 43.

Population of City (estimated)—White, 245,000; colored, 88,000; total, 333,000.

Death Rate per 1000 per annum for Month—White, 17.34; colored, 31.36; total, 21.04.

METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmospheric pressure 29.98
Mean temperature 83.
Total precipitation 4.88 inches.
Prevailing direction of wind, southwest.

New Orleans Medical and Surgical Journal.

VOL. LIX.

NOVEMBER, 1906.

No. 5

Original Articles.

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. A complimentary edition of one hundred reprints of his article will be furnished each contributor should he so desire. Covers for same, or any number of reprints, may be had at reasonable rates if a **WRITTEN** order for the same accompany the paper.)

The Menstrual Cycle; Its Normal and Morbid Psychology.

By D. E. M. HUMMEL,

Assistant Superintendent, Louisiana State Insane Asylum, Jackson, La.

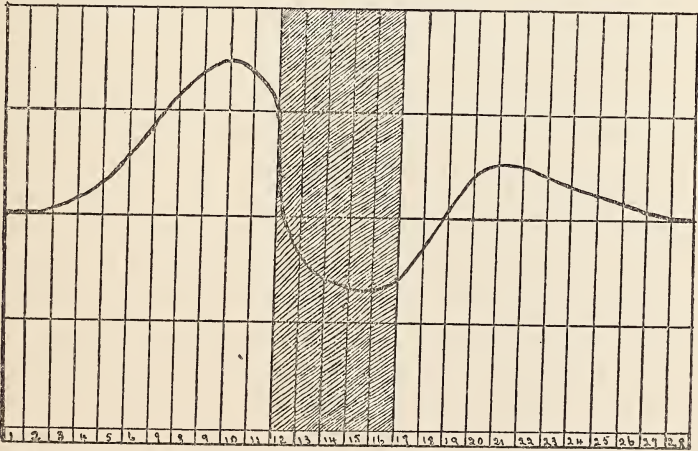
However amply the physical events immediately associated with the catamenial flow have been discussed by gynecologists, it has become apparent after further observation from the psychologist's and physiologist's point of view that menstruation is not an "isolated and temporary affair" of the pelvic organs, but a systemic part of woman's physiology, from the influence of which she is never quite free—at least in a nervous way—during her reproductive life. On both the physical and psychic sides the female organism is not quite the same any two days of the lunar month. Because of this function she does not live on a prosaic level, but moves up and down the scale registering the various degrees between systemic plethora and depletion; is either riding the crest

of a wave of psychic exaltation or loitering on the lower level of apathy. It causes her to deviate more widely from the neutral line in her life experience; it is the basis of the eternally feminine. The generative function in the female being addicted to periodic displays of activity, the general physiology participates in the irregularities thereby caused, both by reason of the fact that the origin of reproductive impulses of every kind are ultimately central and bound up more or less intimately with other nervous and mutual functions, and again through reflexes excited through the pelvic plexuses by the hypermic viscera and through the universal wave of later function. In like manner is the emotional tale rendered variable, but instead of pointing to these changes as fits of whimsical inconsistency, attributive to feminine psychology, it is perhaps fairer to adopt the physiologist's viewpoint, whereupon we see the woman is given greater repertory of personality, rather than that her mental position is detracted from.

We will consider the subject in three phases, viz.: (1) The systemic physical events; (2) The normal psychology; (3) The morbid psychology.

(1) *The systemic physical events*—About midway between two consecutive periods the organism is found steadied between the two physiologic excesses we are about to notice. As the next flow is approached the nutritive wave gradually gathers force manifested by increase in weight, increase in volume of blood, heightened blood pressure, accelerated pulse rate, vascular engorgment of the surface. Anabolic processes work under favorable auspices until the body weight is increased by from 1 to 8 pounds. About the second day preceding the flow the climax in this upward tendency is reached. Just now the temperature may be $.5^{\circ}$ above normal the parotid and thyroid glands are perceptibly swollen, quantity of kidney and skin excretions is increased; in fact all glandular activity is augmented, the sebaceous glands, especially those of the axillæ, act under specialized stimulus, as recognized by the characteristic odor emitted, and the great specialized systems of sebaceous glands—the mammary—are timid and tender. The surface vessels being full and the body fluids being augmented, depressions are filled out, angular points are rounded and the curves of esthetic combines with which nature beautifies the female face and figure are accentuated, so

that personal beauty is greatly enhanced. The cutaneous circulation being more rapid as well as tense, the color and transparency of the skin is heightened. The pelvic organs participate in this exaltation to the highest pitch, as these viscera are all hyperemic. About this time a Graffian follicle is ruptured and the escaping ovum finds its way to the hypertrophied endometrium, then all these preparations having proven vain, it is swept away in the debris and hemorrhage of the flow. Immediately upon commencement of the flow the high tension of the climax begins to relax, and at the end of the flux the physiological status of the whole organism is somewhat reversed. During and immediately following the period the carbon dioxide exhaled and uric acid products of the urine are increased—the smoke and ash of excessive combustion. In a general sense nervous energy is taxed in the removal of katabolic debris. Gradually the organism reacts from depletion and the functional and nutritional wave springs above the level to decline again as the organism poises itself to traverse another cycle. The accompanying chart (after Engelman) is designed to portray the cosmic pulse of a complete cycle. A glance at its tracing will suffice to show under what variations the female organism functions.



Tracing portraying cosmic pulse of Menstrual Cycle.
Shaded spaces represent days of flow.

The normal psychology—In a general way the psychic is affected in an analogous manner as the body state, with several variations.

Elation in somatic states quite constantly means exaltation of mentation. This statement will apply to psychic manifestations incident to fluctuations in body functions all the way around the cycle. We will notice more particularly the psychological manifestations we find grouped about the time of the climax and flow, as these phenomena have the more special significance.

When the wave line is highest during the 48 or 36 hours preceding the initial flow, when the plethora is greatest, there is a state of mental tension which may manifest itself in caprice and defective control, irritability or fickleness of mood. This is the time of nutritional plentitude, but the pelvic organs being especially engorged, make their impress upon mentation through the sympathetic plexuses. Although sensations from these may not be intense enough to be forced into consciousness as conceptions of tension, weight or pain, they are apt to excite one of the three most common psychic reflexes, irritability, dullness or stupor, or depression. Necessarily all nervous phenomena are likewise influenced. Most of the peripheral reflexes are exaggerated, strong flexor muscular groups are apt to explode in spasmodic movements under trifling stimuli and finally co-ordinated movements are affected. The nervous reflexes behave very much as in sthenic febrile states. As the flow begins plethora is relieved and with it much of the psychic tension, but certain mental spheres concerned in sex play remain exalted. Woman is now most conscious of her womanhood, she is ever so careful of her toilet, is most attractive to and attracted by the other sex, she takes greatest pains with the minutiae of dress and is "longer before the mirror." Her esthetic sense is heightened, she is most impressionable, most apt to break out in jealous impulses, most confiding and most amenable to suggestion. Whereas there seemed to be an excess of mental energy before and in the early stages of the flow, noticeably in clumsiness or intemperance of some kind, the flow apparently relieves the inordinate pressure and gives way to a saner, better adjusted exaltation. so that mental acumen, alertness and greater grace of movement is observable; and woman's intuitive sense and tact, which make her so superior in her sphere, is just now keenest. In those who have become conscious of that impulse the *nisus generativus* is heightened just before, during and especially for 3 or 4 days following the flow. This is an average truth.

The morbid psychology—It will be seen that what takes place in abnormal psychic reaction to menstruation is quite often an exaggeration of the normal. Through defect or disease the subject is unable to subdue the fits of temper or impulse, and these assume undue sway, manifesting the inordinate cerebral perturbation. [A well balanced brain may be unduly sensitive to organic stimuli and there may be reflex headache, mental malaise, precordial distress and cardiac palpitation. According to Finkelstein the field of vision is sometimes narrowed and there are disturbances of the color sense and other misinterpretations of sensation.] Many are the minor nervous ailments of women attributable to the catamenia, ranging from slight hebetude to absolute morbidity of mood. The line of demarcation between the normal and morbid is necessarily faintly drawn and uncertain. Associated with the trifling psychoses are the commonly recognized neuroses quite familiar to gynecologists. Turning from these to the graver, more purely psychological reactions, to the menstruum wherein actual insanity is involved, a larger question is encountered. To what extent do the disturbances incident to this function determine insane attacks and how is the course of insanity of common causation influenced thereby? Referring to the first question, the old idea that either amenorrhea, dysmenorrhea or menorrhagia are responsible in a truly etiologic sense for the graver psychoses has been abandoned. Very often suspension of the function occurs just prior to the development of an attack of insanity. Reasoning *post hoc ergo propter hoc* alienists assumed that the suspension was responsible for the psychoses. This was a mistake. It is now known that the process has failed in these instances because of the reduced condition of the general economy. We have spoken above of menstruation as homologous to an incipient gestation. The female organism being, in reproductive activity, gaged to support primarily itself and secondarily the fetus, whatever of trophic energy is expended in gestation or this accessory process must come of an excess of what is required for the mother organism. In other words reproduction is overproduction. Through dyscrasias the vital activities are curtailed, and in the natural order of events this reproductive accessory is shut down. Amenorrhea is merely concurrent with the mental dissolution, and in no wise responsible for it. Re-

establishment of the function is a good sign under the circumstances because it signifies return of the system to the normal. Dysmenorrhea excites, reflexly, morbid states of mind, even where the cerebral balance is fairly good. The pain is of such a character as to provoke widespread reaction in the sympathetic sphere, and marked disturbances of the vasomotor equilibrium is the rule, so that the brain circulation is not infrequently involved. So excruciating may the pain of dysmenorrhea be that the sufferer is sometimes rendered absolutely frantic. Associated with either excitement or depression certain absurd appetites or cravings may be aroused.

Regarding the second question, the writer has had good opportunities for observing the psychic phenomena of menstruation in established cases of insanity. Most commonly melancholics become more depressed, maniacs more excited, epileptics more prone to convulsive seizures, hystericals more hysteric, hallucinations occur more vividly, idiots get intractable. In other words, an insane woman is made more insane through psychic hyperesthesia induced by menstruation. However, not only is there accentuation of existing morbid states in the general cerebral agitation, but careful analysis of the phenomena displayed at the time will demonstrate their ulterior lines of tenor to be focused in the sex sphere. In the presence of decided insanity, certain considerations aside, we have better opportunities of observing the true import of emotional caprice and impulse which in the sane we are accustomed to regard as destitute of sense or motive. Women, who through disorganization of the most delicately evolved brain mechanisms, whereby they are enabled to elaborate the cruder incentives into refined expression, and to sustain the play of esthetic niceties implied in the modesty and reserve which adorns the feminine personality, exhibit a psychology resolved into its elementary constituents. It is easier to interpret speech and behavior under these circumstances. Often there is a strange admixture of rank erethism and furious causeless anger with coprolalia and profanity. These irregularities are to be explained by the fact that sexual erethism frequently has the energy from its fermentation irradiated into their kindred emotional spheres, sometimes in a purely vicarious manner, somewhat in the same manner as we occasionally find the physical phenomena of menstruation expressed. Others

in whom inhibition has not been so weakened or who have retained a greater refinement of expression, reveal their tendencies with an exaggerated coyness, nestling in the hair and other silly and harmless pranks more characteristic of adolescence. I have observed three rather phenomenal cases, manifesting intense excitement at occasional periods. One patient in the height of her excitement, at one moment will revile and curse those around her, while in the next instant she may be making a display of brave eroticism. Another case presents marked hysterical outbreaks with psychomotor instability resembling chorea. (At times I have noted in this patient decided swelling of the parotid and hyperemia of the pharynx and larynx with hoarseness; also the mammæ are much swollen and on one occasion lacteal fluid was present.) Still another case presents alternate phases of stupor and explosive violence. All three patients are quiet and tractable on ordinary occasions. Sometime ago I reported a case of maniacal depressive (circular) insanity, in which it seemed to me the length of the circle had been determined by menstruation. My conclusion was based upon the assumption that the subject had come by the insane temperament hereditarily, and that the menstrual climaxes had contributed the influence meting out the circle length.

From these observations we may summarize (1) that the catamenial climax in the presence of defective cerebration tends to exaggerate the humors and bring into bolder relief mental incongruities characterizing the case; (2) that this disturbing influence subsides with the abatement of the function giving rise to it, but sometimes an impending psychosis is precipitated thereby; (3) that the natural underlying tenor of menstrual excitement being sexual, such proclivities are often, where insanity exists, both elated and improperly inhibited, and further that agitation of some one of the kindred sphere of impulse is frequently induced, either vicariously or by reason of the fact of their being functionally allied or grouped together.

A Peep Into Foreign Surgical Clinics.

By DR. J. D BLOOM, New Orleans.

It is in evidence that the service of instruction in England, in practically all scientific branches, is carried on in an exemplary

manner, and that her unimportant present day position in medical progress and advance, is indeed an injustice to the sure-footed scientific headway that offers every show as abreast with the scientific world. Her place in anatomy and physiology has won a fame that to-day alone obtains with us. I am more convinced by the insights to the present day work, that her advance has been constant, sure-footed and, to the present accomplishment, on equal plane of surety to other countries. The English surgeon leads a continuously active life, having little time for relaxation or association with fellow professional friends, unless by journalistic or society association. A noted surgeon made mention to me of this in comparing the opportunities of growing America and the spirit of interest one felt in another's work, mentioning the comparative lack of this opportunity that existed in England. He recalled the changes that had taken place in his own technic and fixed ways, by a forced visit to America, where he had the opportunity of seeing others work. This surgeon is one of England's most renowned leaders. In Liverpool I was received most courteously by Prof. Boyce, whom your readers may remember as one, who, in the epidemic of 1905, dwelt among us as an observer and student. He showed me the educational working of the University, with which he is connected, and its manifold buildings.

Prof. Boyce's accurate report to the British Government is a just document, and replete with a respectful recitation of facts as he witnessed them. His expressed admiration for our medical men, and in particular our Dr. P. E. Archinard, was pleasing. Dr. White greatly shared his confidence. The Doctor's views on yellow fever pathology are sharply defined, and based on his experience in countries south of ours, where the pernicious types of malaria more frequently prevail.

Medical men in England take the title of "Doctor," and surgeons of "Mr."

At Leeds my visit was made particularly interesting by meeting and witnessing the surgical work of Mr. Moynihan, whose technic and accurate manipulative skill are admirable. I was an onlooker at four consecutive gastro-enterostomies done for pyloric stricture, secondary upon a condition of ulcer, and frankly marvelled at its frequent occurrence. In two of these cases a tumefaction could be

discerned before the abdominal incision was made; and the patients, except one, were past middle life. Mr. Moynihan told me that he had done 140 of similar anastomoses this year without a fatality. His method of suture is entirely by hand, his needle a full curve, and requires time to gain dexterity in its use. The abdominal incision was through the rectus, and his suture of this was new, continuous and oval that approximates the parts anatomically perfect. His clinic in this particular confirmed the signs of location of the ulcer so deservingly creditable to Mackenzie.

I afterwards was most delightfully regaled by a work in particular, along with a most interesting series of clinics, by Mr. H. J. Stiles, of Edinburgh. I refer to the particular work as his method of staphylorraphy, which is the most unique, simple and certain of favorable outcome that I can recall having seen. His method in the treatment of congenital hip dislocation, scrofulous ulceration by sunlight, and congenital hernia, the latter he regards as a congenital sac and not a pathologic condition, reflects an intelligence of thought, observation and reasoning that accords him the position Scotland justly honors him with.

My meeting Dr. C. A. McAllum, the accomplished anesthetist, who attends the various patients of Mr. Stiles, was very edifying; and the observation of Mr. Stiles and himself upon the results of chloroform in favoring the spread of sepsis, and ether in doing contrariwise, so pertinently confirmed by statistical showing, is to be admired, and is in accord with our own observation, until this time unexplained, relative to the anesthetic. Additionally he demonstrated to me the practical working of the Dudley Ruxton modification of the Junker chloroform inhaler, for face, mouth and laryngeal or throat surgical work. This inhaler has certainly every practical advantage.

Dr. John Thompson, of Edinburgh, whose observations on congenital gastric spasm or a condition of hypertrophy and stenosis of the pylorus, it was my good fortune to meet. I had occasion to see this condition in one of his private patients, a child of four weeks, upon whom Mr. Stiles operated by dilatation through the stomach. Anastomoses has frequently been done for this condition by Mr. Stiles, and to his credit many lives have been saved. I must confess that so far as I know, we have overlooked this condition.

Whilst Ireland played a part in my itinerary, I will not dwell on its progress other than to say that it confirms the advance of England.

In London the work of Mr. Hurry Fenwick entertained me. I witnessed him do an internal urethrotomy for a condition of stricture, associated with a widespread infiltration of perineum. Through his kindness I met Mr. Openshaw, whose operative clinic I attended, and witnessed an operation for hydrocephalus by pia mater drainage that won my admiration for its plausibility and possible favorable outcome, in contrast with the permanency and destructive effect of the condition. I have expected to hear from Mr. Openshaw regarding the outcome of this case, but at this writing his letter has not come to hand.

And of the wonders and marvel of surgical science with which I have been entertained, I think it quite appropriate that I conclude with a mention of a visit to Dr. Doyen, of Paris. For the elegant detail of the institution over which he presides, too much cannot be said in praise and admiration. His own unique methods and opinions are evidenced by no apparent showing other than what is earnest and sincerely the result of a deliberate thought. His surgery must impress one, and his results confirm its plausibility. Among other operative work I witnessed him do a hysterectomy by his method of enucleation. In this there is much to admire, through its protection to essential parts about, and the speed of its doing, not to speak of the deliberation that led up to it as a method. His abdominal retractors are very smart. The suture he uses for the abdominal wound is continuous and not circular, in contrast with the Moynihan, though equally as admirable.

My time abroad has been made so instructive by the spirit of caste that exists, that the pertinency of the lines in the Vicar of Wakefield additionally typifying a privileged study, force themselves upon me: "In the middle order of mankind are generally to be found all the arts, wisdom and virtue of society. This order alone is known to be the true preserver of freedom, and may be called 'the People'."

Louisiana State Medical Society Proceedings.

(EDITED BY PUBLICATION COMMITTEE).

P. L. Thibaut, M. D., Chairman.

Difficult Diagnosis of Yellow Fever Cases.

By DR. L. SEXTON.

The question of diagnosing cases of yellow fever in a given community after an epidemic has broken out, is comparatively easy, though doubtless many cases are improperly called yellow fever under the above named conditions, but the correct diagnosis of the first case of yellow fever that occurs in the spring, summer and fall months in a community where yellow fever has not previously been known to exist, is quite another proposition.

First cases, acclimating, walking or mild cases of yellow fever, or cases occurring in children and among colored people, are very difficult to diagnose.

Nearly all diseases have symptoms, which to the clinician are known as cardinal symptoms. If you were asked for these cardinal symptoms in yellow fever, you would, perhaps, answer, fever with jaundice, albuminuria following a chill after an acute onset, with tendency to hemorrhagic gums, and nauseated stomach with slow pulse, and great prostration following the fever.

The recent difference of opinion in regard to cases occurring this Winter and Spring, caused the president of your section to ask some one to prepare a paper on these differential points, and the lot fell to me.

I have nothing particularly new to offer in regard to the diagnosis of early cases of yellow fever, but a short review of some of the cardinal symptoms at this particular season and time may not be inopportune, and as a guide for future reference may help some of us when these close diagnoses, upon which so much depends, are to be made.

Given in any tropical climate, an acute febrile condition, following a chill with jaundice, stasis, albuminuria and disproportion between the pulse and temperature, excessive back, leg and

head pains, with great prostration—how are we to honestly come to a conclusion with regard to the case, provided such case be the first, terminating by recovery?

In studying such a case we should, if possible, obtain the full history as to his or her habits, and whereabouts for the previous three to five days before the onset. The initial chill in yellow fever is supposed to come on most often at night—many exceptions to this rule occur.

From such a beginning in this given case, after the patient had been in communication with some vessel, or sick person from some tropical climate, it would render the diagnosis of yellow fever very probable if *stegomyia fasciata* mosquitoes are present at the time.

If, after the first 24 or 36 hours this temperature of 104° or 105° gradually falls to normal with a slow pulse and great prostration, followed by perhaps a secondary rise of temperature after 36 or 48 hours with albuminuria, and slight jaundice, the suspicion of yellow fever would be greatly increased, but no positive diagnosis could be made until malarial fever had been excluded by an absence of the plasmodium malaria in the blood, not one, but several examinations having been made. Typhoid should also be excluded by the Widal reaction.

It would also become necessary to eliminate the possibility of a case of catarrhal jaundice, or albuminuria and some fever resultant from auto-infection.

Severe back, head, loin and muscular pains, flushed face and hyperemic eyes, a congested skin and neck and chest, a sort of stasis of the blood with bleeding gums and narrow red-edged tongue with middle coating; a slightly jaundiced appearance becoming more marked each succeeding day, pulse becoming less frequent for three to four days until, perhaps, 45 or 55 beats per minute are recorded; highly colored, scanty albuminous urine and finally hemorrhage from mucous membrane, suppression of the urine and black vomit with uremic coma—makes a very good pen picture of a case of yellow fever with, perhaps, a fatal termination.

Several of these cases occurring in the same family, or being traced to the same infected house, leave hardly a doubt of the nature and character of the disease, even though no epidemic.

But it is the mild non-albuminuric, or in some, even walking cases of yellow fever, about which there is so often an honest difference of opinion. Many of these cases in our last three epidemics have not even gone to bed on account of the fear of quarantine or the inconvenience of fumigation incident to being reported sick.

The range of temperature in this mild yellow fever is from 99° to 101°. Half a thousand of such cases occurred at Ocean Springs in 1897 without a death. The real nature of the disease was not suspected until it attacked one whose constitution was already in a run down condition with resultant serious symptoms, black vomit, suppression of urine and death.

Many of these mild types of yellow fever go unrecognized and are accountable for the spread of disease in the strictly quarantined towns where the tracing of infection is otherwise impossible except upon the theory of these walking cases of yellow fever bringing the infection into the town or city before the quarantine restrictions were put on, or the nature of the disease understood. It is such cases of mild yellow fever, in our opinion, that pass muster for dengue in Havana, Texas and many other points to avoid the rigors of quarantine, on account of the mildness of the fever, or the lateness of the season in which they occur.

These cases come under Finlay's classification of acclimating or non-albuminuric yellow fever, though if you examine the urine of some of these cases two or three days after the fever has disappeared, you will very likely detect a trace of albumin.

It is our impression that the immunity claimed for children reared in tropical climates from yellow fever is due primarily to the children having actually had this mild yellow fever without the parents or the doctor recognizing same at the time of the attack.

It is particularly in this mild type of yellow fever, or dengue (as it was originally called), which preceded each outbreak or epidemic of yellow fever, in which the doctor experiences the greatest difficulty in actually saying: This is, or is not yellow fever.

The distinguishing points that we have to watch in these mild cases is a slight jaundice of the conjunctiva even when the skin is not tinged, great prostration, out of all proportion to the mild-

ness of the fever, rather more head and back pains than you would expect from a temperature of 100° , a slight trace of albuminuria a day or two after first onset; a progressively decreasing pulse to perhaps 50 or 60 may be reached where the pulse normally would have been 70 or 80. These cases occurring in groups in neighborhoods, all seeming to originate from some particular house, or occurring after attendance upon some funeral or sick friend, all of such environments or conditions would tend towards the establishment of a diagnosis of yellow fever. But to be absolutely positive in such cases requires more than a single visit or observation upon one case. It necessitates all the corroborative evidence to make the careful diagnostician absolutely sure of his position before he subjects any community to the great inconvenience and even injustice of many of our modern quarantines.

While the presence of albumin in the urine is a corroborative symptom, its absence does not render it impossible to be a case of yellow fever. Where the kidney functions are active and a great deal of water has been imbibed, it is possible to suffer from a very mild case of yellow fever without albumin occurring at all. An ordinary malarial chill grafted onto a case of intermittent albuminuria occurring during yellow fever epidemics is almost invariably reported as a genuine case of yellow fever, and this is particularly true if catarrhal jaundice happens to complicate the same case.

Albuminuria may be cyclic, dietetic, febrile, gouty, nephrogenous, false when the albumin comes from pus or secretions in the urinary passage. You will thus see some of the many conditions in which we have albuminuria that might be associated with pneumonia, tonsilitis, malaria, typhoid, influenza, dengue or any of the infectious fevers, which, grafted onto the above conditions producing albuminuria, might at least, if occurring during the prevalence of yellow fever, cause a wrong diagnosis to be made, as we have albuminuria occurring in 100 different diseased conditions.

It is in such conditions as these just described that puzzle the clinician when he comes to make his diagnosis in the first cases of yellow fever occurring in a given community.

There is a very close similarity between estivo-autumnal and

severe cases of yellow fever. Each is ushered in with a chill followed by high fever, albuminous urine with strong tendency to hemorrhage and congestion of internal organs. It is practically a matter of impossibility to distinguish one from the other within less than four to five days, and then the chief point of difference is in finding the crescent malarial bodies in the blood of the aestivo-autumnal patient. The clinical pictures of each run in such parallel lines that it is next to impossible to make the differential diagnosis without the aid of the microscope.

This variety of malarial fever occurs mostly in the late summer and autumn months, and is occasionally designated malignant, hemorrhagic, malarial, swamp or rice fever, the prognosis of which is as bad as the worst type of yellow fever. Several times we have had honest difference of opinion from our expert boards as to whether a given case was yellow fever or aestivo-autumnal fever.

The clinical pictures are practically the same, the finding of malarial crescents in the blood proves the case to be partly malarial though it may be mixed infection; at the same time there are so many parallels between malarial and yellow fever, so many symptoms and conditions identical, each having the mosquito as an intermediary host, that it would not be surprising to us if the etiological factor in yellow fever, when finally worked out, proves to be some blood parasite similar to the malaria plasmodium, that at present is ultra-microscopic, or it may be possible that it is some ptomain resulting from some parasite, which our microscopist up to date has not been able to isolate.

Yellow fever among the darkies is, as a rule, hard to diagnose. Among them it is more common than generally believed, on account of their having fewer mosquito bars to protect them from the stegomyia; their disposition to sleep at any and all times wherever night overtakes them. Their usual mosquito netting is of wide mesh or badly torn; their desire for attending the sick, and especial pleasure in going to funerals, rendering them peculiarly liable in thus visiting the infected house where yellow fever is not known to exist. They visit the sick, not only of their own race, but of all their neighbors, sometimes from curiosity, and again to play the part of the good Samaritan.

The stasis or congestion in the white person is the counterpart

of the skin with ashy hue in the colored subject suffering from yellow fever. The fever as a rule does not register so high, nor is the secondary rise so apt to occur as in the Caucasian subject. The disproportion between the pulse and temperature is more marked in the colored race, perhaps, than in the white; the pulse rate of 45 to 55 is not of uncommon occurrence.

So many blue gum negroes have naturally red or congested eyes from the little care or protection which they have from fire, dust and sun, and so a congested or even inflamed condition of the eye does not count as much for yellow fever in the colored race as it would in the white. After three days of the pronounced fever, close inspection will usually reveal a yellow tinge in the conjunctival portion of the eye. Many darkies, however, have this hue in perfectly normal condition.

Inflamed, bleeding gums in the darky would cause more suspicion of yellow fever than would the same condition in the white race. Swollen thick lips, red throat and narrow tongue, with a very irritable stomach, and the above symptoms alluded to would present a very suspicious case of yellow fever in the negro.

The negro mortality is twice as great in the average diseases as in the Caucasian. In yellow fever the very reverse of the proposition is true. In fact in the milder types of yellow fever among the colored people at Tallulah, La., Doctors Gaines and Bass are authority for the fact that many suffering with mild yellow fever did the cooking and cotton picking for the town and country around Tallulah, La., in the epidemic of 1905.

Be especially suspicious of cases which fall sick from three to five days after visiting some house or attending a funeral, or cases that have developed in from 15 to 18 days after some sick stranger has perhaps visited a neighborhood.

In yellow fever times particularly, inspect any large number of reported deaths from uremia, acute parenchymatous nephritis, hepatitis, bilious remittent fever, swamp or hemorrhagic, malarial, typhoid fever, broncho-pneumonia and tonsilitis with auto-infection, as any of these diseases may be confounded with yellow fever by those who are inexperienced in its diagnosis and management.

In diagnosing yellow fever in any given community it would be

quite a help in coming to a conclusion if the *stegomyia fasciata* mosquito were found to be coexistent with the fever. On the other hand the absence of *stegomyia* would not prove absence of yellow fever.

We must remember in differentiating yellow fever from other conditions that in an uncomplicated case of yellow fever we would have the following clinical picture:

Sudden onset, usually at night, severe lumbar, head and leg pains, peculiar facies with anxious expression and congested eyes, pulse bounding and full, especially as temperature rises; usually nausea and vomiting of bile, pain and tenderness over the stomach, intense capillary congestion of the surface of the body, hyperaemia which disappears on pressure of the finger but quickly returns when pressure is relieved; usually mental dullness and greater prostration that you would expect in ordinary fever.

This clinical picture may last for 24 hours, when it may be followed by lysis or secondary rise in temperature or collapse, jaundice, anuria with hemorrhage from gums, nose vagina, and rectum, as well as the black vomit which is considered characteristic of the disease.

With many exceptions and additions the following comparative tabulated symptoms may aid in the early diagnosis of cases:

	DENGUE.	YELLOW FEVER.	ESTIVO AUTUMNAL MALARIA.
Time	Any time.	Fall and summer months.	Early autumn.
Eruption	Rash 3d or 4th day.	Hyperemia Stasis.	Blanched appearance.
Pulse	Quickened	Usually slow after second day.	Fast.
Jaundice	May have Jaundice.	Early Jaundice usually 2d or 3d day.	May have 4th or 5th day.
Temp.	Mild.	Usually 99-104.	Below normal to Hyperpyrexia.
	Constipation.	Constipation.	May have colliquative diarrhea.
Spleen	Normal.	No change except in mixed infections.	Usually enlarged.
Liver	Slightly enlarged.	Liver dullness increases.	Liver enlarged.

	DENGUE.	YELLOW FEVER.	ESTIVO AUTUMNAL MALARIA.
Tongue	Heavily coated.	Pointed, smooth and red edged tongue.	Broad, flat, coated tongue, impression of teeth on sides.
Eyes	No change.	Injected and red.	Sunken and dull.
Stomach	Slight nausea.	Pain, nausea and tenderness.	Nausea and congested.
Vomit	Mostly bilious.	Bilious and black.	Bilious or blood.
Urine	May be albuminous.	Usually albuminous.	Usually not as early as second day.
Temp.	After third day remissions.	Usually reaches normal after 36 hours.	Subnormal or remittent.
Pains	Excessive muscular and joint, smaller joints swollen.	Considerable in legs, back and head.	No particular place.
Gums	No change.	Swollen and tendency to hemorrhage.	Pale.
Hemorrhage ..	In severe cases may have Epistaxis, Hematemesis, Haemoptysis. May have enlarged glands. Ambulatory cases rare.	In severe cases likely to have hemorrhage.	Haematuria more common. Can have hemorrhage.

Requirements of the Mosquito Doctrine.

Address of Chairman of Sub-Section on Maritime and Inland Quarantine.

By DR. S. L. THEARD.

Gentlemen—It was my intention at first to prepare an elaborate paper, reviewing and analyzing some of the more important recorded facts and incidents of our immediate sanitary history (and some as yet unrecorded ones), but I soon realized that whatever might be said must finally be made to rest upon certain primary basic principles, a brief consideration of which would be all-sufficient; for upon their intelligent application must eventually depend the success of all sanitary operations directed at the control of yellow fever.

I take for granted that everybody accepts today the mosquito doctrine of yellow fever transmission—that no one any longer seriously disputes the fact that the *stegomyia* mosquito, a most common species of the insect in the South and the Tropics, is the natural conveyer of yellow fever; that mosquitoes can suck up infectious germs from the blood-stream of yellow fever patients only during the first four days of the disease; that *stegomyia* mosquitoes become infectious only ten or twelve days after becoming contaminated; that they can transmit infection continually thereafter, at intervals of feeding, until death; that *stegomyia* bite preferably in the daytime; that a non-immune inoculated by the bite of an infectious mosquito will show symptoms of yellow fever only three or four days afterwards (exceptionally, five or six).

Rigid tests, both direct and eliminative, have established all of this.

I assume also that the more important characteristics and habits of this species of mosquito are well-known, for instance, that it is a domestic, not a migratory, mosquito, flying but short distances and being habitually found within houses.

All of which is sufficient for present purposes. The fact, for instance, that only the female bites, and not the male, is a matter of no practical importance here, however entertaining it may be to lay audiences; for sanitary measures directed at mosquito destruction will in all likelihood never include the weeding out of the males from the females. No greater importance attaches to many other details, purposely omitted here for that reason.

To maritime quarantine the application of the mosquito doctrine is most simple, *theoretically*: It calls for disinfection, with an efficient culicide, of all vessels from infectible ports, together with their cargo, before unloading, and the detention for five days, for observation, of all persons from such ports. This can never be put into practice, however, because of the exigencies of trade and travel. The disinfection of the cargo of fruit vessels, for instance, most attractive to mosquitoes (as much so almost as sugar), could not be effectively carried out without so injuriously affecting the fruit as to make it unmarketable. Again, I seriously doubt that hindrances thrown in the path of an American citizen because of the mere possibility of his being infected in consequence of his

accidental residence in some port classed as "infectible," could stand the test of law.

There is even less probability that measures approximating the extreme requirements of the mosquito doctrine will ever be operated in guarding against the entrance of infection by way of the back-door—the railroads; for experience has taught us that danger from that source is much less, and restrictive measures will probably always be less stringent in consequence.

The point which I wish to make clear, and emphasize, is, that no system of quarantine will ever prove an absolute safeguard against the entrance of pestilence. It will merely reduce the danger to a minimum.

Even if an apparently ideal system could be devised, sober judgment would temper our expectations with the thought that perfection, unfortunately, is of another world only.

Our present system of maritime quarantine could be made the highest expression of what will probably ever be attempted in this direction, at least for many years to come, by reverting to the former practice of disinfecting the empty hold of fruit-vessels from *infectible* as well as from infected ports. This seems to have given us temporary immunity in the past, for a period of years, as was pointed out to this Society at its 1903 meeting.

We cannot brush by lightly the possibility of future infection. Just as long as yellow fever exists, and I am yet to learn of a single disease which has ever been wiped out from the face of the earth (names change, but diseases remain); just as long as there are *stegomyia* flying loose somewhere in this wide world of ours: just so long will we have to reckon with the possibility of the re-introduction of yellow fever infection and be prepared to prevent its spread when it appears.

What, then, should our conduct be when the disease shows in our midst? is the question which naturally suggests itself.

Careful consideration of the mosquito doctrine, in its application to the local control of the spread of yellow fever, forces upon us three conclusions:

First. *We must prevent the access of non-infected mosquitoes to yellow fever cases during the first four days of the disease.* This can only be done by the judicious use of the mosquito-bar, and

those various oils so repulsive to mosquitoes. Necessarily the results obtained will largely depend upon the active co-operation of the household.

Second. *We must destroy mosquitoes possibly already infected.* This can be accomplished, partly by screening of the infected room or rooms (to prevent the escape of contaminated mosquitoes until they can conveniently be destroyed), and partly by fumigation (more especially of living apartments.) In a measure we must again depend upon the co-operation of the household, both active and passive.

Exceptionally another room may be prepared by screening and fumigation, for the reception and further treatment of the case, and all mosquitoes immediately destroyed, by fumigation of the remaining rooms.

Oiling of water containers in the infected and eight adjacent squares will also serve to diminish the number of mosquitoes liable to become infected, either from the actual case if the screening is imperfect or not continuously practiced, or from some other unrecognized or unreported case in the same neighborhood.

Fumigation of contiguous houses might also be practiced, where permitted.

Third. *We must prevent the access of non-immunes to infected localities or infected premises.* This can only be accomplished by the judicious use of the sanitary cordon at the outset, and later of a modified house-quarantine for the prevention of promiscuous visiting and the removal of persons, possibly in the incubative stage of the disease, from infected to non-infected districts.

These are the three basic requirements—the indispensable tripod—in all measures directed at the control of yellow fever. They are the inevitable corollary of the Mosquito Doctrine; they naturally flow from it.

To ignore any of them would be a grave mistake. Such omission could only result from the grossest ignorance of the subject, or the poorest judgment. Or else we would have to look for its explanation in the inability to enforce full measures of prevention because of a half-stand wrongfully taken at the outset, and persistently kept up thereafter for the apparent stake of consistency—the result of a reprehensible and futile effort to prac-

tice that abominable policy—concealment. Futile indeed, for truth in the end must inevitably prevail.

The principles themselves are not new.

As for the methods here suggested for their enforcement, they have with me the strength of faith ever since my acceptance of the mosquito doctrine, and are, as succinctly stated, the same views held and the same recommendations made, to the proper health authority, as early as July 13th, 1905.

No one disputes the correctness of the first two propositions: screening of patients and infected premises, and destruction of mosquitoes. Regarding the third there seems to be a divided opinion, (as far as I have been able to ascertain in conversation on the subject.) Some favor the sanitary cordon under all circumstances; others are in doubt as to its possible effect for good, save in the first two or three cases. All, however, seem to agree that a modified house-quarantine is most important.

By modified house-quarantine I mean the stationing of guards at the door of infected premises to prevent removals and promiscuous visiting. No further restrictions need be placed on the members of the household, who cannot, as we now know, convey infection to others, and who would be at perfect liberty to enter and leave the house, as they please. In the light of the mosquito doctrine, the stringent measures of 1897 are no longer permissible.

Guards might, additionally, be stationed at the four corners of badly infected squares. And if the desirability of operating this measure be granted, we have, in essence, the rudiments of a sanitary cordon, which can be made large or small according to the exigencies of the case, and the amount of infection to be contended with. With this important difference, however, that such restrictive measure should be applied at the very outset, on the first intimation of the presence of infection, in an endeavor to strangle the disease outright, and not be gradually evolved as the epidemic progresses.

Against house-quarantine the only argument, with a semblance of force, which can be advanced, is, that rigid measures might tend to discourage the reporting of cases. To begin with, a modified house-quarantine, such as I have suggested, is not a rigid measure. Nevertheless let us carry the argument to its logical conclusion.

There are persons who object to a guard in front of their house in smallpox; others, to sanitary surveillance of convalescent scarlatina cases; still others, to disinfection after diphtheria, or to a card on their door, or to any sanitary care and attention which may be bestowed upon them by boards of health. Shall all of this be abandoned in consequence? The very absurdity of the proposition becomes apparent.

The epidemic of 1905 has frequently been compared with that of 1878, and most laudatory conclusions have been drawn therefrom, from time to time. The truth of the matter is, that, while much was accomplished, a good deal of what might have been done was not even attempted. And here is the result: Through the screening of patients, and the wholesale destruction of mosquitoes, by fumigation and oiling, the number of cases was markedly reduced; it is probable, also, that the character of the epidemic was changed, from what appeared to be at the outset a most virulent type, to a much milder form of the disease; for, remember, the degree of reaction in individual cases depends as much upon the number of bites inflicted by contaminated mosquitoes as upon the degree of infectiousness of the contaminated mosquitoes themselves. But, through failure to regulate the access of non-immunes to infected premises and localities, the disease was permitted to spread rapidly to the four corners of the city; and, appearing in our midst at about the same time that it had shown itself in 1878, it disappeared only when the usual duration of yellow fever epidemics had been spent, some ten days sooner only than in 1878.

These are the bare facts of the subject, presented without any blatant effort at rhetoric.

In concluding, let me say that nothing is further from my mind than the desire to minimize or discredit any good work which may have been done in the past, or which may now be under way. The wholesale destruction of mosquitoes last summer was a most essential, proper and laudable undertaking, however costly and however much complained of at times; and the measures now operated throughout the city to stay the rapid breeding and multiplication of *stegomyia*, are no less meritorious.

At no time, in fact, should there be a relaxation in all those preventive measures, which alone hold out a promise of relative

immunity. At no time should there be a lull, from a false sense of security, in that costly vigilance which is the price of safety.

GENERAL DISCUSSION.

DR. KOHNKE. The *stegomyia* is not a day-feeding insect, only, but also feeds at night. This is in accordance with the observation of the French Commission. It is important that this fact be known, and that erroneous impressions cease to be published. For several years observers were of the belief that the *stegomyia* feeds only in the day time, but the latest observations dispose this, and it is now known that the *stegomyia* feeds at night, and, moreover, it is a night feeder during the infectious period of its existence.

DR. THEARD. I want to say that the word "preferably" is contained in the paper. This mosquito bites preferably in the day. There is no statement made that it does not bite at night.

DR. JAMES CARROLL. It is essential that we know that the *stegomyia* is a night-biting mosquito as much as it is a day-biter. It has been shown that it is especially dangerous at night. This has been proven to be true by a number of tests.

DR. MARCOUR. We have heard a great deal about the subject of etiology of yellow fever but very little of its physiology. It is my firm belief that yellow fever poisoning, like all other poisons has a special affinity for certain portions of the body. I think if we discussed the physiology of yellow fever poisoning a little more and did not take up so much of our time with the mosquito theory, which we all accept, we would learn something about yellow fever.

MR. J. C. SMITH. I would like to say a few words about the habits of the yellow fever mosquito. The remarks made by Dr. Archinard are true. Most people in this community have a very erroneous idea about the biting habits of this mosquito. It does bite in the day time, but it bites mostly in the night. The mosquito that bites during the day, according to the French Commission, is usually one that is just born, and after they are a few days old they bite in the night time. My own experience is worth something. I dissected several hundred in order to get at the anatomy. I spent the night time from dusk out on my veranda, and sometimes remained until 12 or 1 o'clock, because it was during this time that I could catch them biting. It is well known that dusk is

the dangerous time, not during the day. The very important observations and experiments made in Rio de Janerio, was that the people who lived and slept at Petropolis coming down during the day and attending to their business, seldom had the fever; but when they remained over one or more nights did they get the fever.

DR. FORMENTO: I wish to call your attention to a point which seems to have been overlooked. I wish to ask how you account for the disappearance of yellow fever from cities where it prevailed extensively for years?

During the last two centuries Northern cities suffered much more from yellow fever than Southern cities of the Gulf and Atlantic coasts. While epidemics gradually disappeared in the North, they became more frequent and fatal in the South. It prevailed as far North as Providence and Boston; quite extensively in the latter city in 1693. In 1700 it was quite fatal in New York and in 1793 a frightful epidemic occurred in Philadelphia, causing 4,000 deaths, during 3 months, in a population of 40,000 inhabitants. Since the early part of last century it has never prevailed epidemically in the North, whilst in our Southern States epidemics have continued to exist almost every year.

How can you account for this? This fact is simply due to the immense sanitary improvements that have been made in our Northern cities—adjoining low lands have been drained, raised and cultivated; the streets have all been filled and paved, a proper system of drainage and sewerage established; an abundant supply of pure water procured, this implies the abolition of cistern water for drinking, etc. The same measures have been successfully carried out in Norfolk, Charleston, Savannah and Memphis, and will give equally good results in New Orleans. Sanitation and screening are not sufficient. Proper sanitation, the enforcement of all laws of hygiene will alone secure, in our country, the disappearance of the mosquito and yellow fever. Public hygiene is costly—never too costly in view of the results. Every large city spends millions for its sanitation.

MR. J. C. SMITH: There are two conditions, and only two, upon which the stegomyia depends, and these are temperature and water conditions. If you remove one of these conditions you destroy it. Water conditions have been removed in New York and those other

cities. In any community, no matter what the altitude, if the water and temperature conditions are proper, you can have the stegomyiæ.

DR. J. M. LINDSEY (a guest of the Society): I wish to make four points on Dr. Carroll's paper.

1st: In looking over literature of yellow fever epidemics we find the first mention of the mosquito in connection with yellow fever by Dr. Valentine Seaman, of New York. He stated as early as 1795 that yellow fever was not contagious, or infectious, as he had noticed cases carried out of a certain district in New York and treated, and no other cases developed therefrom. He also stated in that portion of New York in which yellow fever existed there were a great many mosquitoes.

2d: The English authorities were so impressed with the mosquito doctrine that as early as 1887 they accepted the findings of Dr. Carlos J. Finlay, of Havana, Cuba, that yellow fever was transmitted by the mosquito known as the *stegomyia fasciata*, and Dr. Andrew Duncan, in his book known as *The Prevention of Disease in Tropical Campaign*, page 224, gave Finlay the full credit of the discovery of the mosquito doctrine in yellow fever.

3d: If Dr. Patton is correct, that yellow fever and dengue are the same disease, then yellow fever is indigenous to the South.

4th: There has been a good deal said about New Orleans becoming infected from Cuba. In my opinion this is not true, and I base my conclusions on the fact that Mobile, Alabama, Tampa, Key West and Jacksonville, Florida, had direct communications with Havana during the entire summer without any quarantine regulations and not a single case developed on a ship or in any of these cities.

DR. JAMES CARROLL: In regard to the remarks as to the time that this mosquito bites, I believe it bites in the evening, early in the morning and in the late afternoon. In our experiments in Havana some of our non-infected mosquitoes escaped from the jars in the post laboratory, and they would sometimes alight on my head while working at the microscope. Invariably when this occurred it was later than three o'clock. I have been bitten in this way a number of times, but never before three o'clock in the afternoon. The insect does not seem to like sun light, but there

seems to be no great difficulty in getting them to bite in the day time if you coax them a little. We took them into the hospital and we could get them to bite the patient's hand by covering up the test tube a little. Some folks say this mosquito will not bite the negro. We tried it and found that they would bite a negro in the axilla as readily as they would bite a white baby.

There is a differential point in making the diagnosis between dengue and yellow fever. It is in the leucocyte count. In dengue fever the leucocyte count is always about fifty per cent below normal, and in yellow fever it is either normal or little above normal.

DR. P. E. ARCHINARD: I would like to ask Dr. Carroll his authority for the statement in regard to the diminished leucocyte count in dengue.

DR. CARROLL replied that he did not remember the source of his authority.

DR. JONES: In regard to the point raised by Dr. Carroll I would say that over a hundred counts were made last summer and in nearly all of these cases the leucocytes diminished; sometimes the count was very low.

New Orleans Yellow Fever in 1905.*

By DR. S. L. THEARD.

If the history of the yellow fever of last summer is to be written in the annals of this Society, there at least let it be written right.

If what I am about to say has the appearance of an effort at self-praise, I earnestly ask that you pause a while and consider, that whatever may be said by me now, might have been said some eight or nine months ago, that I persistently refrained during all of that time from any public expressions or utterances in the matter, and that I am speaking now under stress of circumstances.

The claim which I, in turn, advance (and it will be made good by dates and by facts), is: That the backbone of yellow fever was broken in this city last summer whilst the lamented Dr. Richard-

*Paper prepared because of the announcement on the official program of the following subject for discussion: "Rational Deductions from the Fever of 1905."

son and myself were in charge of the special sanitary operations of the Board of Health.

As much was done then as could be accomplished at the time within the lines authorized by the Board of Health. Surely the disease could not have been aborted, for at no time was this feasible in the absence of any restrictive measures calculated to prevent the removal of persons, possibly in the incubative stage of the disease, from infected to non-infected districts, or the access of non-immunes to infected premises, and the consequent dissemination of the disease in that way.

Now for the facts.

Knowledge of the presence of yellow fever infection in New Orleans last summer was first had on the afternoon of July 12. On July 22 announcement of the fact was made by the State Board of Health.

From July 13 to July 22 the sanitary measures practised were instituted, conducted and supervised by the City Health Officer. During that time I was engaged in other work at the office of the Board of Health.

On July 23, after the announcement of yellow fever, the sanitary operations of the Board were entrusted to my care and supervision. On July 26 Dr. Farrar Richardson, of the Public Health and Marine Hospital Service, became associated with me in that work. The health officer at that time was engaged more especially in the delivery of public addresses calculated to arouse the interest of the masses in the mosquito doctrine of yellow fever transmission.

On the evening of July 26, four days after being placed in charge of the sanitary work of the Board, I announced to the Advisory Committee (a committee of seven composed of two representative business men, two members of the Advisory Committee of the Orleans Parish Medical Society, and two members of the Board of Health, with the City Health Officer, also chairman of the Board of Health, as chairman) that I had completed the arrangement of the sanitary forces of the Board into effective organization.

On August 12, in response to an appeal addressed on August 4 to the President of the United States, by influential citizens, members of the medical profession, the Governor, the Mayor, the then President of the Louisiana State Board of Health and the

City Health Officer, the Federal authorities assumed entire charge of the sanitary work in progress. *Formal* transfer of the emergency forces had been made on August 8, on paper, in a letter addressed by the Health Officer to Dr. J. H. White, of the Public Health and Marine Hospital Service; but the *actual* transfer occupied several days, being finally effected only on the morning of August 12.

Now as to the deductions to be drawn from these facts.

I have here a chart, originally prepared some three or four months ago, for possible insertion in the biennial report of the Board of Health, then in course of preparation. It shows the rise and fall of yellow fever from July 22 to November 22. (No record was kept of cases reported from July 12 to July 22, and none can be presented.)

Dots with a connecting light line show the number of cases reported from day to day; heavy unbroken lines are made to divide the map into periods of fifteen days activity, and the reading of the various periods is facilitated by the introduction of a heavy broken line. The reading of each period is made to include the figures of the first day of the following period for the reason that a large number of the cases reported each day were discovered the day before; and for the additional reason that efforts directed at mosquito destruction were in point of fact begun only on the *evening* of July 13, after the Frey funeral, the sanitary operations of the Board thereafter, throughout the epidemic, being always from 3 P. M. one day to 3 P. M. the next day.

The broken black line shows the "epidemic tendency" of the disease from time to time.

Here I must pause a while and make a point most clear.

It is not the total number of cases reported in any given period, as compared with the total number of cases in some other period, which enables us to determine the "tendency" of an epidemic to rise or to abate; it is the relation of the daily figures to one another, in either period, which establishes that fact. For example: If in a given period of fifteen days the cases reported show as 2, 4, 6, 8 and so on up to 30, and in the next period as 30, 28, 26, etc., down to 2, the total in either case will be the same—240;

but clearly in the first period the disease would be *increasing* and in the second period it would be *decreasing*. Bare figures here mean nothing; it is the fact or incident back of them which counts. To make this still stronger: If the daily rate of report was 2, 4, 6, etc., up to 30 in one period, and 30, 29, 28, etc., down to 16 in the next period, we would, in the first instance, have a total of only 240, as against 345 in the next period; still the disease would be clearly increasing in the first, and decreasing in the latter instance.

There is a great difference between the *number* of people walking in a given place and the *direction* in which they walk. And the numerical strength of a retreating army is a matter of secondary importance when chronicling the fact that it is being routed.

It matters not that the disease was decreasing less rapidly than it had increased; the fact that it was decreasing remains. And clearly, a disease which is decreasing is being controlled and is on the wane.

So much for the value of bare figures unsupported by facts or logical analysis. I now revert to the main proposition.

From a sanitary point of view, the result, or effect, of efforts directed at mosquito destruction on a certain day, becomes noticeable only fifteen days afterwards. With this important difference between "point of time" and "point of effect" well in mind, it must be apparent, even to the most superficial observer, that the sanitary control of yellow fever was well in hand at the time that the Federal Authorities took charge. Clearly the top was knocked from the epidemic as the result of the sanitary measures operated from July 28 to August 11; and *whoever was then in charge deserves credit for that work.*

The meat and substance of it all—shown graphically on the chart presented—established definitely and absolutely and beyond all cavil, is: that the epidemic was on the ascending scale up to August 12 as the result of the half-measures practiced prior to the announcement of yellow fever and during the few days required after that to bring order out of chaos and arrange the sanitary forces of the Board of Health into effective organization; that it was on the descending scale during the fifteen days which followed, as the result of the work conducted by Dr. Richardson and myself;

that the fever showed a tendency to rise during the next fifteen days, probably because of the swapping of horses in mid-stream, the United States Public Health and Marine Hospital Service having taken full charge of the work by that time; that it again abated during the following fifteen days; that the fever was never aborted at any time; that after the main force of the epidemic had been taken away from it (through work performed from July 28 to August 11, as expressed from August 12 to August 26) the fever thereafter ran a mild course under the continuous sanitary measures applied; but that it finally disappeared only after the usual period of duration of yellow fever epidemics had been reached—from three to five months—in this instance, approximately, five months.

Here is the chart:

DR. THEARD also said:

"I wish to add (for I have been taught the other night that small and inconsequential flaws are sometimes looked for in order to divert attention from the main issues) that the word epidemic has not been used by me in the usual and more commonly accepted sense of the word—that a majority of the people were afflicted with the disease, or that the deaths from the disease were for a time in excess of the total deaths from all other disease; but merely and only in the sense that it was "on the people," very much as rain might be, extending as it did from Carrollton to the Barracks, and from the River to the Lake.

I also wish to say that some may possibly lean to the belief, held by a few, that fifteen days is too short an interval of time to judge of the effect or result of efforts directed at mosquito-destruction—that an interval of eighteen or twenty days is required. If so, it will only strengthen my position, for I would not be called upon, then, to explain the apparent lack of success following the work practised during the few days which I stated had been required to arrange the forces of the Board into effective organization."

DISCUSSION.

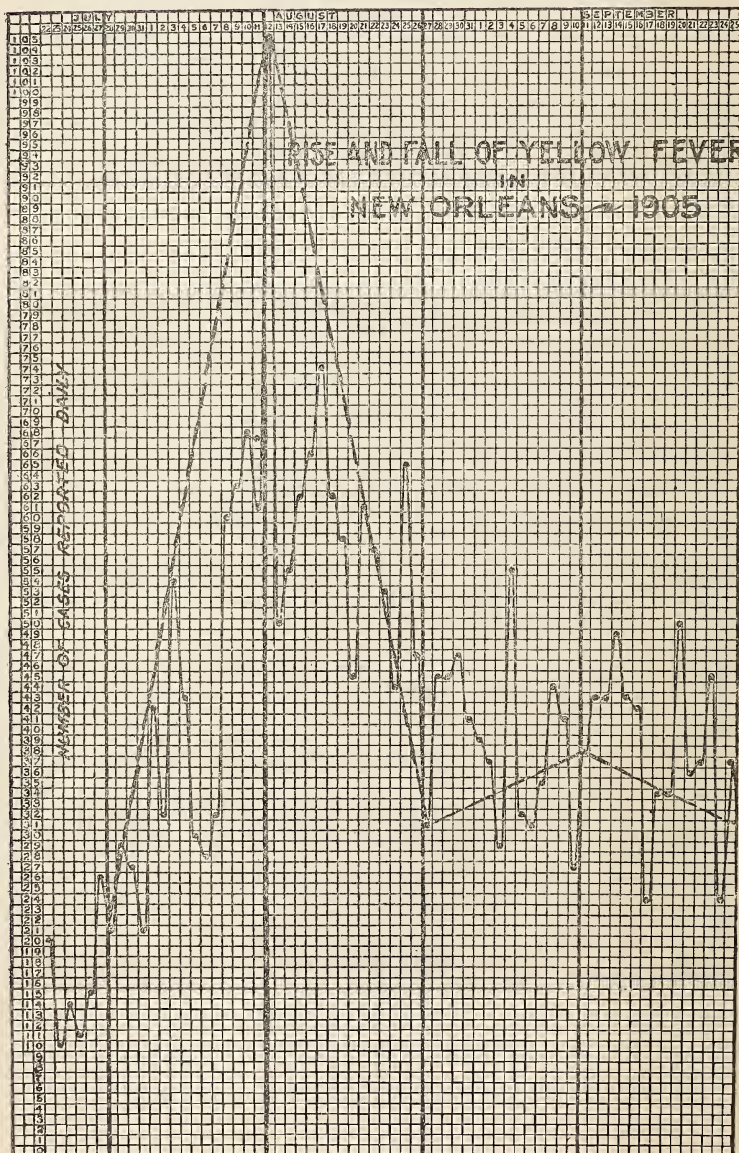
DR. W. M. PERKINS: I want to say that I thought I was quite familiar with the conditions until I heard this paper. I believe that this is a very strong paper and the doctor has well maintained

*Result of Work
from July 13 to 27
(as expressed from
July 28 to Aug. 11)*

*Result of Work
from July 28 to Aug. 11
(as expressed from
Aug. 12 to 26)*

*Result of Work
from Aug. 12 to 26
(as expressed from
Aug. 27 to Sept. 10)*

*Result of Work
from Aug. 27 to Sept. 10
(as expressed from
Sept. 11 to 25)*

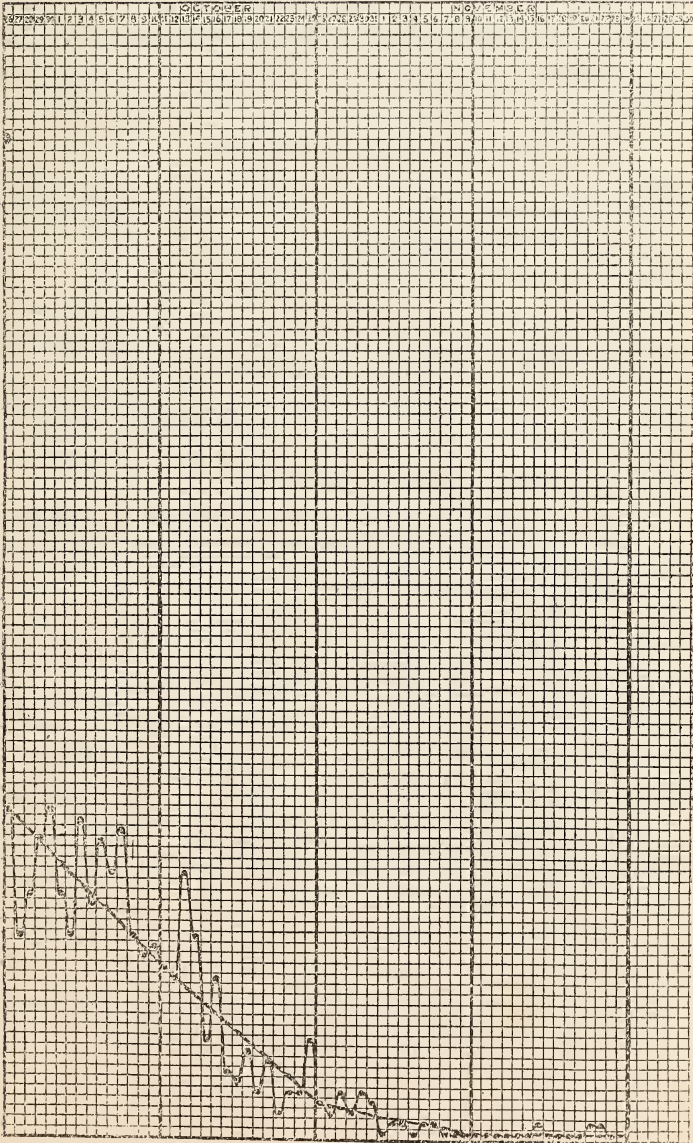


Result of Work
from Sept. 11 to 25
(as expressed from
Sept. 26 to Oct. 10)

Result of Work
from Sept. 26 to Oct. 10
(as expressed from
Oct. 11 to 25)

Result of Work
from Oct. 11 to 25
(as expressed from
Oct. 26 to Nov. 9)

Result of Work
from Oct. 26 to Nov. 9
(as expressed from
Nov. 10 to 24)



his position. That aspect of the situation had not struck me before. Possibly he was right.

DR. LEBEUF: I am sure the doctor is correct.

DR. CHASSAIGNAC: I feel that I ought to say a few words in justice to him and to the Marine Hospital Service. Dr. White stated that the good effects of the work had shown before the Marine Hospital had taken charge. I say this not only in justice to Dr. Theard's position, but also because it is fair to the service for it to be known that they did say that without any reservation.

Orleans Parish Medical Society Proceedings.

President, DR. C. JEFF. MILLER.

Secretary, DR. AMEDEV GRANGER.

141 Elk Place, New Orleans.

In Charge of the Publication Committee, DR. AMEDEV GRANGER, Chairman,
DRS. GEO. S. BEL and E. H. WALET.

MEETING OF AUGUST 25, 1906.

DR. L. G. LEBEUF read a paper entitled

A Case of Mutism in Typhoid.

CARMELITE WALLING, aged 2½, taken sick June 24 with high fever, loose stools and convulsions—child began showing some signs of meningitis; at that time tossing head from side to side, and eyes turned upwards, temperature 105 and over. It was delirious most of the time, and on Sunday, July 2, had another convulsion; after this convulsion child stopped speaking entirely; no sound being emitted from its lips and throat.

When admitted to the Sanitarium, July 7, and referred to me by Dr. Landfried, child had a temperature of 104, pulse 120, a good deal of distention of the abdomen, some gurgling in the right iliac fossa, a few rose spots on abdomen and chest. Tongue coated, pointed and red, quite parched and thin at the edges. Its neck

was considerably swollen and showed an acute inflammation of all the cervical and sub-maxillary glands; liver was tender, but only slightly enlarged. Child was placed on the plain calomel intestinal antisepsis, with later Woodbridge tablets # 2, substituted. Normal saline high rectal enema was used to lower temperature, every four hours at a temperature of 90° and 95°, and in a few days this was used only when temperature rose above 101. A salve of ichthyol and belladonna was applied to glands. On July 10, blood examination by Dr. Pothier showed Widal's reaction positive, and a leucocyte count of 10,860. The child was improved and temperature went down to 100, and it became perfectly conscious. Meningeal symptoms all checked, I was not anxious about the increased leucocytosis; still the speech did not return, the child would cry and some kind of crying noise or sound came from the throat, but it did not seem able to articulate a word. In five days another blood count was made which showed a little over 5,000 to the *c. c.* I found some fluctuation in the glands of the neck, and called Dr. Parham in consultation to open two suppurating glands on July 13. The child improved rapidly from now on, showing in every possible way that it was convalescing. And still it could not articulate a word. There was no sign of pressure on the brain; no difference of size of pupils, perfect reaction to light, no exaggeration or diminution of sensory or motor reflexes anywhere about the body, so I could not account for loss of speech. We tried to teach the child to repeat words after us, the mother would coax it to name a thing she wanted before giving it to her, but all to no avail, and it only seemed to increase its nervousness. On July 15, without any effort, it suddenly began speaking, asking the mother for water, and immediately its speech returned, making sentences from the first.

This *mutism* may have been due to some pressure from meningeal accumulation on the cortex, or it may have been due to a hemorrhage as was suspected at first, occurring during the convulsion, specially as the loss of speech was complete only after the second spasm. Still, as there were no nervous lesion or paralysis, I judge now that it must have been purely hysterical, though intensified by some meningeal pressure on the cortex. The case is reported on account of the age of the child, at which this unusual hysteria is shown.

Mrs. C. Johnson, aged 37, 4 children, 10 years ago had attack of acute rheumatism. About two months ago noticed she was weak in getting up. Fell when getting out of bed. When a physician was called she gave him the former history of rheumatism, so she was placed on iodides. Later she was moved to Hotel Dieu, where diagnosis of rheumatism was confirmed. When I saw her first, I found the following condition.

Objective signs—Face flushed and red, body well nourished; laying in bed legs lie limp and placid. Feet on same level with long axis of legs; lie flabby, limp and inverted; could not extend her feet or toes. Deep reflexes completely lost; superficial reflexes present. Sensation about normal. From elbows down and from knees to toes considerable pain at times. Paralysis of extensors both of forearm down to fingers. These can be closed, but patient has to place hand against some object and make leverage to open them again. The abductors and adductor of the thumb are flat and flabby from atrophy. Whenever hands or feet are dropped or hung dependent along side of the bed they darken and fill up with congestion rapidly.

Subjective Signs—Mind is clear and memory of events of long time ago perfect, but memory of events of recent date very dull. She forgets within a few minutes that I have given her the battery. No history of syphilis, but a distinct history of being a slow tippler. She takes from 4 to 5 drinks of beer a day, and has done so for about 15 years. No one knows of this habit and husband and family are greatly shocked at diagnosis of acute polyneuritis or alcoholic neuritis. Pains in limbs and feet at times is quite severe and with the history she gave of former rheumatism one can understand the mistaken diagnosis made of her case by at least two reputable physicians. The prognosis is favorable, though of course, some time will elapse before the paralysis is controlled.

TREATMENT: Consists of gradually increasing doses of strychnin; bromide to relieve pain, slight galvanic current to extensors, rest in bed, light nourishing diet and absolutely no alcohol.

DISCUSSION.

DR. PATTON related the case of a child about two and a half years old, who, during the convalescence from typhoid, temporarily lost the use of speech. The doctor thought that this occurring in a

child who had so recently learned to talk was due to the temporary forgetfulness of words, a result of the high fever.

He had looked up the literature on the subject and found that this was one of the recognized sequels of typhoid fever in very young children.

DR. MILLER asked Dr. Patton to state if the cases of mutism following typhoid fever reported in the literature were of a permanent or temporary nature?

DR. PATTON: His recollection was that in such cases there was only a temporary loss of speech.

DR. E. W. JONES asked Dr. LeBeuf to state whether his patient suffered from deafness.

DR. LEMANN: The doctor thought that the loss of speech could hardly have been due to deafness, in a child who had previously talked.

The case was especially interesting from the diagnostic standpoint; first, the apparent local character of the trouble; second, the sudden onset of the mutism, which certainly strongly suggested some central lesion.

The prognosis in the second case reported by Dr. LeBeuf, he did not think so favorable, especially with regard to the psychological symptoms, as these patients often become demented.

DR. LEBEUF: Dr. Osler gives a good prognosis in the cases of recent origin, especially when the mental symptoms are not marked. In the case reported to-night, the only mental symptom was the forgetfulness of recent events, with perfect recollection of happenings of even several years back.

DR. GESSNER: If typhoid fever would disturb the minds of older people it is easy to understand that in children it may efface for a time, as he has known it to do, memory and speech.

Regarding the second case reported, Osler speaks favorably of the condition, but he does not recommend cutting off the alcohol suddenly, especially in chronic alcoholics.

DR. J. J. ARCHINARD asked whether the onset of the neuritis had been sudden, and whether the paralysis of the arms and legs had come on simultaneously?

He had at the present time one case under treatment in whom the paralysis had come on suddenly in the extensors of both the

arms and legs. The patient is a draughtsman, and although when first seen the prognosis was thought very good, there is at this time, after two weeks' treatment, little or no improvement in his condition.

DR. BASS: About 18 months ago the doctor had a case of alcoholic neuritis in his ward. The patient presented no mental defect during course of the disease; there is now no paralysis remaining. He got well crippled, as a result of neglecting preventive treatment during the paralytic stage. This is a frequent occurrence.

Patient was operated by Dr. Batchelor, by forcibly correcting the deformities—contractures of feet—under a general anesthetic. A plaster cast was worn for several weeks. Patient is still in the hospital, but practically well—no paralysis, no mental defect, no deformity.

DR. LEBEUF, in closing: Dr. Osler only suggests not stopping the alcohol in the very bad cases too suddenly. We meet cases every day of moderate, but daily users of alcoholics, which come on insiduously. All cases of this class which he has seen have gotten well.

In answer to Dr. Archinard, the patient had noticed for about three weeks before she sought his advice, that the toes would drag and be in the way, and about the same time she dropped a glass which she was carrying to her lips. About two weeks later the paralysis set in. So the paralysis of the arms, hands, legs and feet were simultaneous.

DR. T. S. DABNEY read a paper entitled

Faulty Metabolism in Young Children.

As no paper can exceed twenty minutes of time, and as this subject is a very large one, I must, perforce, confine myself to the salient points under discussion, and I will also confine my remarks to the so-called "food diseases" of children under three years of age.

Nor will the time allowed me permit of the discussion of two of these ailments, happily not so prevalent in our State as in more congested centers. I allude to scorbutus and rickets. Though

both of these affections deserve our earnest consideration, they will have to be passed by in order to consider at greater length other commoner forms of katabolism more frequently observed in this land, where the climate, cheaper land and poor architecture give our people, city as well as country-bred, more fresh air and outdoor recreation.

Derangements in nutrition are so varied and numerous as to form a very large class of ailments during the first three years of life, and are generally diagnosed, erroneously it is true, hereditary syphilis, tuberculosis, acute toxemia, catarrh of stomach, intestines, etc., etc., whereas the trouble is inability of the children to get food suitable for their digestive apparatus by means of which waste can be repaired and normal growth maintained. Another potent factor in the causation of the wasting is the loss of sleep incident to these little ones, literally starving to death whilst unsuitable food is being poured down their little stomachs with unstinted hand. It is now axiomatic that during sleep repair and growth mainly occur. When I say sleep I refer to natural sleep, nature's sweet restorer, and not to that induced by drugs. A suffering child is restless and is constantly in a state of activity, and it is needless to say that the expenditure of energy means loss of substance, whilst its opposite, rest, means functional inactivity, reconstruction of tissue and the restitution of substance. How happily did Shakespeare put it, when he wrote, in speaking of sleep:

"Great nature's second course
Chief nourisher in life's feast."

As the practice of giving anodynes in this class of affections is far too common, both among the laity as well as among the profession, it may not be amiss to call attention to the rationale of the difference in effect between normal sleep, physiological rest, and that produced by drugs.

Normal sleep is produced largely by the accumulation in the blood current, as a result of energy and resultant destruction of tissue, of a large quantity of waste products, called "fatigue substances."

During normal or physiological sleep these substances are eliminated through the various emunctories with the result that the

body is refreshed, strengthened and built up while sleep produced by drugs, the functions of the emunctories being largely checked, these fatigue substances or toxins are not eliminated, and after such a sleep depression, weakness and destruction follow. With this digression, I pass on to the child whose anabolism is not equal to his katabolism. When one of these peevish little ones, with large, anxious eyes, flabby limbs and shrunken belly is brought to us, what are we to do? How often is the fault laid at the baby's door? Many a time I have been told that the baby's digestive organs were bad, and that nothing agreed with him; that everything had been tried; that he had been taken to five or six doctors, and the more medicines and the greater variety of food he took, the worse he got. Very likely.

As we cannot change a baby's digestive organs, the logical thing to do is to adapt the food to those organs and not the organs—as many try to do—to the food. When such a patient is brought to you, especially a teething child in his second summer, be very slow in prescribing. Question closely his mother as to his family history; examine carefully for local or constitutional disease; find out whether the child is allowed to sit at the table and gets surreptitiously or otherwise, food suitable for his elders, but not for him.

Post yourself thoroughly as to the number, character, appearance and odor of the stools, and this can only be done by having some of the napkins shown you.

If, after a careful and thorough examination, you are convinced that you are dealing with a case of malnutrition, pure and simple, your task will be difficult, but not necessarily discouraging, unless you have very great faith in prepared foods, digestants, sterilized or modified milk and specific medication.

Bear in mind always that the most perfect emulsion in the world and the most easily digested is pure, fresh milk, and bear in mind further that this is the natural food for all mammalia, man included. And bear in mind, that, when given at proper intervals, of strength suitable to the age of the child in suitable quantities, it agrees with the vast majority of sick as well as well children. It is hardly necessary to call attention to the difference between cow's milk and woman's milk.

There is one difference, however, that is not sufficiently dwelt on, namely, that woman's milk is always alkaline, whereas that of cows in most parts of the world, is acid.

A notable exception to this rule is in the blue grass region of Kentucky, Missouri, Kansas and Virginia. In connection with this fact it may be stated that the milk of the blue grass country has long been famous for agreeing with children, and a summer in the blue grass hills is better for a marasmic baby than six professors of children's diseases. All of us are familiar with the benefit often derived from milk to which has been added some alkali, generally lime water or milk of magnesia. Heretofore the proper alkalisation of milk has received but scant attention, far too scant, in my opinion. Of course I do not wish to be understood as maintaining that milk will agree with every child. I merely wish to put fresh, pure cow's milk next to mother's milk in the baby's dietary. Man being essentially carnivorous, the first year of his life, we naturally turn to some other animal food, where milk does not suffice. Beef juice, pressed out of a broiled steak at each meal is often very valuable. But that stuff the Creoles call "beef tea" is an abomination in the sight of the Lord, and is absolutely devoid of nutriment, though like Ducro's Elixir and most beef extracts, it is highly stimulating; but food it never is and should, in consequence, be banished forever from the dietary of the undernourished.

Though faulty metabolism occurs at all seasons of the year, it is usually, in cities, at all events, least amenable to treatment in the summer. During what is called the heated term, these little patients literally melt away from day to day, and a marked improvement promptly results from a decided fall in the temperature. This fact alone should teach us that there are external as well as internal factors in the causation as well as in the maintenance of this affection. Though strictly a nutritional ailment, we should not confine our attention to the proper food to be given; but should look carefully after the proper functionary of all the child's organs, skin, bowels, kidneys, lungs, heart and glandular and nervous systems. And whatever inhibits that functioning should receive prompt attention.

As heat depresses the nervous centers, weakens the heart, checks

deep inspirations, impairs appetite and digestion, we must see that the child has a large, well ventilated sleeping room, is suitably clad and is kept out in the open as much as possible.

I often, in the heated term, prescribe a two hours' ride on the ferry morning and evening for these little patients, in addition to the time spent in the parks. Many mothers and nearly all the so-called old nurses insist upon dressing these little sufferers too warmly. They are also generally mortally afraid of draughts and the cold bath. We must look to hydrotherapy as an invaluable adjunct in the treatment of these cases. Cold baths, with vigorous frictioning or, where the child is very weak, cold sponging with frictioning, act as most energetic stimulants, and influence happily all the secretions and tissue metabolism. The temperature of the water should be from 75° to 55° F., *pro re nata*. About two minutes is the average duration of the bath. After the bath the child should be rubbed briskly with a linen towel until dry, and then should receive a generous inunction of pure olive oil. I regard the use of oil valuable in a number of ways, besides having a decided nutritional value. I have often used inunctions of cod liver oil with good results, but the smell is very objectionable to many children, and its benefits seem but little, if any greater than those of olive oil. Small—4 to 6 ounces—cold enemata, given night and morning have a happy effect in relieving constipation, by toning up the colon, and of relieving tenesmus in that obstinate form of diarrhea so often met with in these cases. These enemata act as a powerful neuro-muscular tonic, and add much to the comfort of the child.

But few indications exist for the exhibition of medicines. However, many patients derive marked benefit from minute doses of calomel combined with chalk in varying proportions, usually a powder consisting of hydrargyri chloridi mitis, gr. 1/10, and cretæ præp., gr. ij. to be repeated every 4 hours, may be given in cases where the odor of the stools is very offensive or when the discharges are very watery. I have purposely left the diet for the last in order to emphasize the importance of other equally necessary things in the treatment of faulty metabolism in young children. All of you, by referring to your books on pediatrics, can find any number of diet lists, good, bad and indifferent, mostly bad and many very bad. These lists, as a rule,

are prepared by some professor and are long and imposing looking. They may be of use in dispensary practice, where the likes and dislikes of the child receive but scant attention and, where his recovery or demise matters but little; but in private practice, among the intelligent working class or among the so-called better class, these lists are practically of no value. Much of the stuff is so unpalatable, though doubtless digestible and suitable enough, that the average child simply refuses to eat it. The appetite of these little ones *has* to be consulted; their tastes have to be considered and their whims have to be humored. A great variety of suitable food, prepared in a tempting way to the child, has to be substituted for these lists. The physician must himself know many ways of the same foods, if he would succeed in treating these cases successfully. In commending so highly cow's milk for children, no longer at the breast, I did so as that is practically our only available supply. In South America ass's milk proves a valuable food for these children. The milk of goats is exceedingly valuable where the goats have good grazing and browsing, but I cannot recommend the milk of city goats, who gain a precarious livelihood by subsisting on the labels of tin cans and whatever is left—the cans, as well as our cigarette and cigar stubs. The food of all milch animals has to be carefully looked after. Rotch, of Boston, has shown the world that through proper feeding, the cows of Massachusetts can be made to give milk with an alkaline reaction and by so doing render more nearly similar to woman's milk. Cows fed on brewery swill give milk utterly unfit for a sick child. It will be seen from the above that the physician's duty is to see that his patients get their milk from animals that are properly fed, if he wishes to get good nourishing food.

Emmett Holt, in his excellent work on pediatrics, gives, in addition to his diet list, "a forbidden list." In this forbidden list I find many foods of very great value. The following are some of the articles forbidden by Dr. Holt under any and all circumstances: Pork, ham, bacon, game, dressing from roasted meats, green corn, onions, tomatoes, all nuts, syrups, preserves, hot breads of all kinds, batter cakes of every variety, wine, beer, all tinned fruits and all fruits out of season. Dr. Holt also disapproves of butter, and suggests substituting cream. Granting, for argument's

sake, that pure sweet cream be more ready assimilable, yet how few children would agree to the substitute. Dr. Holt allows a small quantity of ice cream once a week only. In my practice I encourage the most liberal use of butter, as well as ice cream, and I know of no two things more likely to agree with a child.

Most writers on children prohibit all sweets, syrups, sugar, preserves, etc. Yet sugar is an essential in the diet of man. Sweets should be given with discretion, but not prohibited.

Personally I do not believe in any hard and fast rules as to diet. Each child should be a law to itself. There is not an article in the above list that I would hesitate to give to a child suffering from faulty metabolism. I can go farther and say that, when properly prepared, many of the forbidden articles will prove not only grateful but highly nutritious in this affliction.

The fat of ham, shoulder or middling, that has been thoroughly boiled is as digestible as any of the oils, is more palatable and fully as reconstructive. Partridges, robins, ricebirds, doves and some other of the smaller grown birds, when broiled are very tempting to a child and seldom disagree with him. Tender green corn, boiled exactly six minutes in the shock, will be found a most dainty and digestible diet, provided the very simple expedient of splitting the rows of grain with a sharp knife be adopted to prevent the child from swallowing the silicious covering of the grains.

A small slice of a ripe tomato, with salt on it, or a thin slice of onion, infrequently act as a fill up to the child that has distaste for all food. I will not take up more of your time going into details, but will mention in passing that nuts, preserves, syrups, hot breads, especially hot crackers and hot toast, as well as wines, beer, etc., will all be found useful in the hands of a careful physician.

To sum up, in a few lines, our treatment must be made to suit each individual case. We must bear in mind that digestion in children with impaired digestive organs, must necessarily be slower than in those whose organs functionate normally, therefore *less* food and that at *longer* intervals must be given to these children than to those with natural digestive organs and though this food must be, as a rule, simpler and must be given with greater regularity, overfeeding or feeding at short intervals must be jealously guarded against.

The strictest attention must be paid to the child's clothing; to the ventilation of his sleeping apartments; to his bathing; to his outings; to his sleeping. In a word we must endeavor to conform as strictly as possible to general hygienic laws, and like Hippocrates we must appreciate the importance of nature, "*natura marborum medicatrix*," In writing on "*De Alimento*" how wisely does the Sage of Cos say:

Natura omnibus subvenit; naturae omnium nullo doctore usae sunt.

The great Sydenham fully agreed with Hippocrates' axiom:

*Morbus nihil aliud est quom naturae Conamen materiae morbi-
ficae exterminationem in aegri salutem omni opere moliens.*

Let us follow in the footsteps of those medical seers.

DISCUSSION.

DR. LEBEUF wanted to know what "Creole" beef tea was. No real rule holds good in pediatrics. Two or three years ago, he had met in New York the wife of Dr. Austin Flint, Jr., and treated one of her sick children, who very happily made a prompt recovery. When Mrs. Flint was told that in the treatment of the child he had followed Dr. Emmett Holt's textbook on pediatrics very closely, she answered that she would have been greatly worried had she known so, for there were no more sickly children in New York city than Dr. Holt's children.

The nearest thing to human milk is ass's milk. Next came that of the goat, which can be easily obtained in Louisiana. I have had some 18 cases of severe bowel and stomach trouble in children which have invariably improved upon the use of goat's milk. The mammae of the goat can be very easily kept free from dirt, much more so than either those of the cow or the ass. Goats never have tuberculosis. The advantages, then, for goat's milk, are: First, its freedom from infection and contamination; second, freedom from tubercle bacilli; third, natural alkalinity—all of which account for the good results obtained by its use.

DR. GESSNER had fed his three babies artificially, with very good results. He uses peptogenic milk powder and thinks it a very good thing. Inunctions of fat, especially butter, have often given him good results in marasmus. He was much impressed by the recom-

mendation to take the children out in the open air frequently. Excessive heat prevents the proper nourishing of children.

DR. LEMANN was astounded by the very large dietary allowed by the essayist.

DR. STUMPF was opposed to the use of milk, in any form, in such cases.

DR. PATTON wanted to know the views of the essayist on the quantity of water to be given in such cases, as he believes that children are often denied a sufficient allowance of drinking water.

DR. DABNEY, in closing: Sweets should not be entirely left out, but he made use of sparingly. In some cases give nothing but milk, if possible. Alkalinize it and if it disagrees, use modified milk. Inunctions of butter would possibly do better than those of olive oil. The good obtained depends upon the amount of fat absorbed. He gives hot bread and green corn to children between two and three years old. He does not mean hot fresh bread, but hot toast bread or crackers, which have been cooked over (that is, dextrinized.) The hot toast or cracker is more digestible and palatable. Of course, the corn should be well cooked.

A sick baby should have plenty of water. Feed it at longer intervals (4 or 5 hours) and between the feedings give lots of water and cold water.

DR. C. J. MILLER reported

A Case of Suppurating Sub-Urethral Cyst.

He called special attention to the difficulty of recognizing some of these cases and to the persistency of the affection. The woman had been treated by two physicians for cystitis; the bladder had been washed many times, but there had been no cystoscopic examination of the bladder, or urethra, nor a careful vaginal examination. The first time she was examined the cyst was discharging into the urethra, and she was suffering acutely from vesical tenesmus and throbbing pain behind the symphysis pubis. The point of discharge was easily located at the time with a Kelly cystoscope, and the treatment consisted of daily milking of the sac, by massage, until the sac contracted and the pain disappeared. Six months later the pain returned, but was described as a continual throbbing and pressure pain without tenesmus. Vaginal examina-

tion again revealed the sac as a firm cushion-like swelling under the inner third of the urethra, just in front of the bladder neck. Cystoscopic examination showed that it was not yet discharging into the urethra and an operation was advised before such a complication occurred, so that the sac could be drained without causing a urethro-vaginal fistula. The sac was incised under local anesthesia and drained of about two teaspoonfuls of muco-purulent fluid. It contained a distinct lining, showing its cystic nature and differentiating it from the cases arising from chronic circumscribed urethritis of specific origin. The lining could not be dissected free, so the cavity was packed after the edges were stitched to the vaginal plate.

She made an uneventful recovery and obtained immediate relief from the distressing pressure and throbbing. Dr. Miller had treated four of these cases. He did not consider them so rare as some authors have stated.

The treatment of these collections is clearly indicated; the diagnosis is perplexing, especially if the abscess is not discharging at the time the examination is made. Patients usually give a history of urethral symptoms of some standing.

Kelly first called attention to the fact that almost all were chronic when they reached the specialist. If the abscess is discharging near the neck of the bladder, vesical tenesmus may be marked. The nearer the sac is situated to the bladder the more marked are the bladder disturbances (Skene).

Palpation will show the thickened edges of the walls of the urethra if the trouble has been caused by peri-urethral inflammation. Pus may ooze constantly from the urethra, or may be discharged suddenly in considerable quantity. The urethral speculum is valuable as a diagnostic aid. Treatment consists of dissecting out the sac, or thoroughly draining it, and the use of a catheter for some days to avoid a permanent fistula.

DISCUSSION.

DR. CHASSAIGNAC: The analogous condition in the male accounts for many cases of prolonged urethritis.

N. O. Medical and Surgical Journal

Editorial Department.

CEIAS. CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

The Teaching of Medical Jurisprudence.

It is no new idea to venture that the student of medicine should be instructed in the questions which relate to both medicine and law.

Whenever the trial of a criminal case has demanded the testimony of medical men this has resulted in a wide variance in the recorded opinions in the case. Oftentimes the legal adviser goes out of his way to select the sort of material which will attach itself to the testimony which he desires. This has been so evident that considerable discredit has been cast upon the entire medical profession because of the notable display of difference in opinion where a careful analysis of conditions would indicate that there should have been a consensus. More than this, the testimony being partisan frequently carries even the honest witness away from his customary reasoning, because he inclines to serve his employer and urges his mind to the line of deduction which he might not under ordinary circumstances follow.

The Patrick case in New York is a striking example in point. Here, in spite of the testimony as recorded, in spite of a repeated judicial disposition of the case, the man accused of the murder of old man Rice is still fighting for his life upon the chief ground that the medical testimony was sufficiently irregular and obscure in its deductions to demand investigation. It seems that this opinion is not only held by the condemned man, but a recent petition to the Governor of New York State, urging the appointment of a medical commission, entirely impartial, has been signed by nearly 500 physicians of the State, many of whom stand in the first ranks of the profession. The petition itself is worthy of notice,

because it roundly criticizes the testimony in the case because of the diversity of opinions which have gone on record.

The medical jurisprudence which is usually taught in the medical schools covers only a narrow field, and that in a few lectures which are given perfunctorily in the professorate of another branch. The result is that the medical graduate is absolutely unqualified as a medical witness in extraordinary cases, and it is doubtful if he could give adequate testimony in an ordinary case. In the more pretentious medical schools, sufficiently endowed to be beyond the necessity of demanding tuition fees, courses on this branch are given, and adequately.

It has frequently been suggested that every State should make provision for a commission of medical experts, who should be qualified in the several lines in which testimony usually is demanded, but this arrangement is open to serious objection because it at once offers the opportunity of political disposition of the places on such commission, and it would be difficult to make a proper selection because it would be almost impossible to find those who could pass upon the proper qualification of the commissioners. The exigencies of medico-legal evidence cover a wide field which would include poisoning, coronery practice, railroad damage suits, inheritance, mental disability, and others besides. The borderland of medicine and law is at times broad in its relation to both, and it requires the same education, and even training, to meet the need or the occasion. It would be, therefore, a profitable investment for the medical schools in this country to regularly import the group of men of continental Europe who have devoted their several lives to these studies, and who are better able to teach the intricacies of an almost unknown and certainly neglected branch of medical science. Even the texts on medical jurisprudence fail to cover the full ground, and are written more for the seeming demand than for the actual instruction of the student.

It may be argued that the average medical man has nothing to do with the practice of medical jurisprudence, but this argument could hardly stand if a survey were made of the reported cases, which would naturally fall under this head in the fields of psychic, mental, moral and criminal medicine, detailed with more or less completeness. At any rate, the plea for a better knowledge of the subject can do no harm, and it may succeed in stimulating the desire for a wider knowledge.

Another Benedict,

Quite a year ago and a few months, the junior editor of this journal got married—quietly. During the past month the senior editor of the JOURNAL left for a vacation and returned a Benedict, as quietly and as well. We, junior and senior editors, now having many reasons for editorial concert, desire to editorially make this announcement, last and first, and for fear that in congratulating ourselves on the conversion of our senior we should appear to speak too editorially as the junior, we desire to say that the JOURNAL extends to our senior editor, Dr. Chassaignac, the felicitations due and their pleasantest fulfilment.

Miscellany.

Parisian Medical Gossip.

THE ART OF CURING—OLD MEDICINE—SMALLPOX AND RED RAGS—NEW FOODS—THE SOLEMN OATHS TAKEN BY THE ANCIENT FRENCH APOTHECARY—THE INSPIRATION OF DRUNKENNESS.

Translated by THOMAS O. MINOR, M. D., Cincinnati, Ohio.

The "*Journal de Medicine de Paris*" in an editorial remarks: We call medicine "the art of curing." Should our pride be so profound? Ages of experience and of striving have taught us that, if our audacity is great when we attempt cures, our strength does not always go as far as success. At the end of our resources, physicians, the real high pontiffs of medicine, let in the surgeons, the ex-barbers, as competitors. We must avow that most so-called surgeons are rogues, at least such as have found the knife the only remedy for disease. In place of watching symptoms or seeking specifics for maladies the surgeon cuts. So did Alexander cut the Gordian knot. The increasing fashion of this simple cutting method has given general medicine a rude blow. In our art, as in politics, the Radicals beat the Conservatives. What amuses the

modern surgeon, rude soldiers that they are, is to see physicians discussing and disputing on the value of such and such symptoms, wrangling over equivocal diagnostic signs and their value, while they, the surgeons, hold the solution in their knives. When surgeons have the courage and sharpened steel they attack every organ in the human body without hesitation. All the same it is sad to abandon the struggle, and admit that lost health may be recovered only at the expense of the integrity of organs, and that *Nature*, the only true physician, is impotent to cure.

An old doctor, whose funeral I followed only last year, once remarked to me: "My profession never gives me satisfaction. Every time a patient dies on my hands I think my science is incomplete or my skill insufficient—perhaps, even, my medical attempts injurious to the patient. On the contrary, when a patient recovers, although certain I have been useful, I have never been able to attribute the cure to my skill. A true and conscientious doctor can never sleep soundly, for he carries on his shoulders the burden of responsibility in the confidence people repose on him. He must answer to his conscience, and, by fatality, the power he has to injure is a thousand times greater than his science to cure."

This doctor was a country practitioner, who never left the bedside of a very sick patient, except to study each case in his library full of books. He lived in almost poverty, never obliging people to pay for his services that he considered of doubtful value. I esteemed this man as the medical equal of any great professor in France. When he was taken down with pneumonia I went to his assistance, and found the impotence of my own therapeutics in a disease that surely cures itself or kills.

The whole country-side came to this well-loved physician's funeral. They had starved him, but knew he was the ideal family doctor.

Doctor Paul Delaney in a recent French exchange observes:

We know that in 1893, Professor Finsen, of Copenhagen, having noted that the more accentuated cicatrices of smallpox were principally on the parts of the body exposed to light, proposed to treat variola by red light; for the red part of the solar spectrum is least rich in chemical rays; to the contrary, the violet and ultra-

violet rays act very energetically upon the integuments and favors diapedesis. Finsen's patients were then confined to red rooms, lighted up by red glass windows, and under this treatment suppuration was abated, and smallpox pitting was almost unknown. These experiments were repeated in France by Hinger and Juhel Renoy. Others applied it in vaccination. Goldman proposed to make all vaccinations under red light; Roeslar covered the vaccine wound with a red glass cap, so as to efface the scar as far as possible. If this method has only received in our day a scientific confirmation from Widsmarck and Hammer, it does not date from yesterday. It was known and fully discussed in the seventeenth century. Doctor Nicolas Andry, who was dean of the Paris school from 1724 to 1726, did not believe in the efficacy of red curtains to prevent the pitting from smallpox.

La Mettrie, in 1748, rebuked Saddesin and Sylva for their extraordinary remedies, and said of one of these doctors: "He wraps all his smallpox patients in red cloth, has the bedchamber all furnished in red, even the windows and curtains are red, affirming that this is the true secret to prevent smallpox pitting." (*La Mettrie*, Geneva, 1748.)

An old author cited by MacAuliffe also shows us that Finsen had forerunners of his so-called method, even in Scandinavia. "Some years ago there came from Finland to Stockholm a woman who presented herself at court, claiming she had discovered a method to modify smallpox and a means to almost prevent pitting. She revealed her method to me. The remedy consisted in placing the patient in red fabrics, and even the face was to be covered with a red mask. I praised her good intentions, and found the remedy very useful. I learned afterwards that Dr. Micea, of Basle, had inoculated a child and put its legs in red stockings; he thought that itching and sweating would be induced in the limbs covered, and that the eruption might be thus carried to the legs from other parts of the body, but he was astounded on removing the stockings to find only two pustules on the legs. As the patient had been duly prepared for inoculation Doctor Micea thought the variolic virus had been evaporated by the pores of the skin." (See *Memoires Academie de Zurich*, Tome III, p. 121.)

Long before this, even in the Middle Ages, smallpox cases were

provided with red coverlids to prevent pitting. It is said that Finsen got his first idea of the color treatment of disease from a book written by a New Orleans physician early in the eighteenth century.

The celebrated Ambroise Paré also recommended "this cure in smallpox and measles." He says: "The patient should be placed in a warm room where there is no draft of air, then he should be covered in scarlet cloth or red stuffs, that is to say, the curtains around the bed; so that the smallpox or measles may come out." (Works of Ambrose Paré, Lyons, 1641. Livre XX, p. 467.) The old Hotel Dieu had red curtains around its beds. This is a small note to be added to the *History of "Chromotherapy."*

The *Temps* has published a letter from one of its correspondents affirming that the wood of the fir tree is a good food, if cut up into small pieces. "Ordinary bread," says the writer, "has not half the tonic value as fir wood, nor is it half as strengthening. In place of buying a ham in order not to starve I used fir branches since May 1st last." An English medical journal also insists that there is no reason why wood treated chemically, like wood paper pulp, should not be used as an edible, also that cast off paper collars and cuffs, and even wood pulp newspapers, after proper chemical treatment, are highly nutritious.

After all, why not? Doubtless after gay suppers one might absorb too much ligneous material, yet, fed on oak, he might grow very strong. One, too, could judiciously choose trees having various medicinal essences. Some people eat quinin; that is only cinchona bark. Let us honor modern science that has given the world so many new things to tempt our appetites. They make cider out of pine cones now, and champagne out of potatoes. Science has given us bromic and boracic acid to preserve our foods and drinks, putting the glow of health on anilin injected roast beef of Old England (imported from Chicago), and Southdown mutton (embalmed in Australia); spring chickens, ten years old (embalmed and from Chicago cold storage). Yes, modern science has done much for the human stomach. From an economic point of view we have this new discovery of the real value of paper collars, cuffs and old newspapers, etc. People are duly warned against using too much

chestnut wood as an article of diet; it is said to provoke frenetic transports. What of willow bark? Salicio, a young French poet, climbing Parnassian heights after a willow diet, wrote the following, then died of acute meningitis:

*"Celui la ne serait pas vraiment miserable
Qui sur sa table, pour souper, t'eut mis—erable."*

Some modern xylophagics eat branches of various trees, some eat the leaves, and some the stones of berries. All tea and coffee drinkers do the same, without ever dreaming they are wood eaters to a certain limited extent.

The law (*Germinal*, Art XI) obliged old-time French pharmacists to take the following oath:

"I swear to exercise my profession with fidelity and probity. As a Christian, fearing God, I swear before God, Author and Creator of all things, that I will strictly observe, point by point, all the following articles:

"1st. I will live and die, in the Christian faith.

"2d. I will love and honor my parents, so far as possible.

"3d. I shall honor and serve ever faithfully the doctors in medicine who have instructed me in the knowledge of pharmacy, and shall also respect my master and teacher in drugs.

"4th. I swear never to lie about physicians or any master in pharmacy.

"5th. I shall ever endeavor to sustain the honor and glory of medicine.

"6th. I shall never prescribe without the advice of a physician.

"7th. I shall never sell purgatives to people with acute diseases without first consulting their doctor.

"8th. I shall not examine women's forbidden parts for the purpose of applying any medicinal remedy.

"9th. I shall not sell poisons to any person.

"10th. I shall never give a woman an abortive potion.

"11th. I shall not change the prescription of any physician without his previous consent.

"12th. I shall never use any substitute for the article prescribed.

"13th. I shall not order or fill the prescriptions of charlatans, empirics or alchemists.

"14th. I shall keep no spoiled or inert drugs in my shop.

"May the Lord prosper me as I observe this oath faithfully."

It is a great pity and shame that the modern patent medicine and substitute vendor does not take the same solemn oath that his pharmaceutical ancestor did. The modern pharmacist is all too often a mere seller of tobacco, soda water, soaps, perfumes, combs and brushes, yet there are honorable exceptions, would there were more.

Doctor Octave Beliard, in a late number of the *Journal de Medicine de Paris*, writes as follows:

I believe that the anti-alcoholic crusade is bearing its natural results. I have not gone into a close study of any statistics, that is not my affair; I can prove, however, that in France, for the first time in ages, has been noted a failure in its literary and artistic geniuses. What is genius—especially in arts and literature—except a species of insanity, the exterior sign of cerebral anomaly, a faculty proliferating at the expense of others, an exuberance invading the intellect in the manner of a noëplasm (moral); and art is the effect of this intellectual disorder. There is something congenital in this malady, *nascuntur poetæ*, but it is no less true that irregular alcoholism, even drugs that stupify at times, singularly aid in the development of what is known as genius. One cannot deny that the great classics, written by men of ponderous intellect, men who wrote verse or prose, arranged their thoughts in mathematical series as geometry continues its lines. Grand men these, moralists and philosophers; but it would be a misnomer to call them all poets; there is something lacking in many of these works; there is no sweet song of disorder of the Python on his tripod. *In order to have true inspiration*, a great genius must have been drunk. There would have been no Horace save for Falerno wine, no Rabelais or Villon except for the wine of Chinon or Beaune. Shakespeare was a convivial drinker at country taverns. Edgar Allen Poe, the finest of all American writers, a man whose literery brilliancy increases as the world grows older and recognizes his eminent genius, found the secret

of his fantastic and marvelous imagery in a bottle of gin or brandy. *He died from it*, poor fellow, even as the great Hoffman, strange to say, like Poe, a drunkard. Do you think that Musset would ever have written his "*Nuit d'Octobre*" without his mixed drink of beer and absinthe? Do you suppose that the immortal Baudelaire could have ever written his inspiration, "*Fleurs de Mal*," without alcohol? Balzac indulged in a drinking orgie when he needed inspiration after overwork. Victor Hugo dearly loved his rum. The last one of the great poets, Verlaine, had an ever-dry throat and a continual smacking of his lips after liquor; he never amorously engaged the Muses without a plentiful supply of drink. At the present day what writers has France? Genius has never been separated from alcohol, even in the most remote ages, as said before. All great writers and almost all great artists have been lovers of wine. True classical art is dead—so-called progressive moral reform has killed it. Far be it for me to preach intemperance; yet the truth remains: water-drinkers are never men of genius—that is, great genius in literature or art. No one desires to return to the days when men, like the immortal Villon, shed emotional tears (alcohol) in coffee houses and counted the frills on Margot's petticoats without the least dread of cirrhosis of the liver, and it has lately been shown in the sifting of thousands of post mortem in London alcoholic institutions that cirrhosis *of the liver* is a very, very rare disease among drunkards—as rare, in fact, as cigarette smoking is a direct cause of insanity, for the insane hospital statistics of all countries evidence the fact that it is the least of all causes of insanity ascribed in such institutions. What humbuggery is used in the name of medicine, to ascribe all diseases of the liver to alcoholism, and insanity to the use of tobacco! Such claims are not founded in fact, and are merely made by alleged moral reformers who, unable to drink or smoke even in moderation, deny the same privilege to those even who can use things temperately. The nineteenth century, that ascribed all maladies to germs (who ever saw the germ of smallpox, French pox, scarlatina, measles, yellow fever or other common infectious diseases?) and sought to terrify mankind, will be laughed at by the twenty-first century—mosquitoes, fleas, flies, gnats, ticks, bed-bugs, to the contrary notwithstanding.

Louisiana State Medical Society Notes.

In Charge of DR. P. L. THIBAUT, Secretary, 141 Elk Place.

NEXT MEETING: NEW ORLEANS, MAY 14, 15, 16, 1907.

OFFICERS—President, Dr. Henry Dickson Bruns, New Orleans; First Vice-President, Dr. Charles McVea, Baton Rouge; Second Vice-President, Dr. George F. Wilson, Bienville; Third Vice-President, Dr. A. J. Perkins, Lake Charles; Secretary, Dr. P. L. Thibaut, New Orleans; Treasurer, Dr. Jules Lazard, 830 Canal Street, New Orleans.

COUNCILLORS—Chairman, Dr. E. J. Graner, 2d Cong. Dist., New Orleans; Secretary, Dr. J. L. Seales, 4th Cong. Dist., Alden Bridge, La.; Dr. P. E. Archinard, 1st Cong. Dist., New Orleans; Dr. J. Wofford Sanders, 3d Cong. Dist., New Iberia, La.; Dr. S. L. White, 5th Cong. Dist., Ruston, La.; Dr. C. M. Sitman, 6th Cong. Dist., Greensburg, La.; Dr. C. A. Gardiner, 7th Cong. Dist., Sunset, La.

(Continued from October number.)

The Secretary read the report of the COMMITTEE ON PATENT AND PROPRIETARY MEDICINES, as follows:

REPORT OF THE COMMITTEE TO INVESTIGATE RESOLUTION OFFERED BY DR. F. W. DORTCH, RELATIVE TO PATENT AND PROPRIETARY MEDICINES.

To the Officers and Members of the Louisiana State Medical Society.

Gentlemen: Your committee appointed to consider and report on the resolutions of Dr. Dortch on patent and proprietary medicines, are of the opinion that the matter is of the highest importance. The question is sufficiently vital to demand legislative enactment, but we believe that it is not advisable at this time to attempt any steps with the Legislature; 1st, because the amendments to the Medical Act will require the concerted effort of the Society; and, 2d, because the many points raised by this resolution will demand both serious thought and ample time to mature into a form ready for legislative action.

Under this opinion we beg to report that the resolution should be laid over for another year; that a special committee be appointed to take up the points in the resolutions and any others that may be derived by careful study, and that the whole be digested and presented comprehensively to the end that the question

may be ready for the action of the Society at its next meeting, and finally prepared for presentation to the Legislature of 1908.

Respectfully submitted,

(Signed)

F. W. DORTCH, Chairman;
L. LAZARO,
ISADORE DYER,
J. T. HALSEY,
E. DENEGRÉ MARTIN.

Upon motion of DR. CHASSAIGNAC, the report was adopted.

DR. A. F. BARROW read the report of the nominating committee, as follows:

New Orleans, May 8, 1906.

Mr. President and Gentlemen: Your nominating committee desires to make its report and in doing so begs leave to state that all its recommendations are the expression of the unanimous decision of the committee, at a full meeting. The following are recommended as officers of the society:

President—Dr. H. D. Bruns, of Orleans.

First Vice President—Chas. McVea, of East Baton Rouge.

Second Vice President—George F. Wilson, of Bienville.

Third Vice President—A. J. Perkins, of Calcasieu.

Secretary—P. L. Thibaut, Orleans.

Treasurer—Dr. Jules Lazard, of Orleans.

Councillors for 2 years from date:

First District—Dr. P. E. Archinard, of Orleans.

Second District—Dr. Ed. J. Graner, of Orleans.

Third District—J. W. Sanders, of Iberia.

The names to be recommended to the Governor (one to be appointed) to fill vacancy on Board of Medical Examiners—Dr. F. M. Thornhill, of Bienville, and Dr. J. C. Willis, of Caddo.

Delegate and alternate to the A. M. A. we have preferred to leave open for your consideration for the following reason, viz.: We believe it is very important that our State should have full representation in our national organization, and as in the past it has happened that, while numbers of Louisiana physicians attend the A. M. A. meeting, it has almost as a rule happened that those elected to represent us did not as a whole attend, leaving us often

with only one representative. After full discusison your committee has thought it might be wise for the society to empower the President to appoint delegate and alternate from among those who actually attend the association meeting.

Place of Meeting—New Orleans, La.

Dates—May 14, 15 and 16, 1907.

We desire to compliment our secretary and staff for the very efficient services rendered the society and recommend as honorarium for secretary the sum of \$500.00, and for the assistant secretary \$35.00.

A. F. BARROW, Chairman.

Upon motion of DR. E. D. MARTIN, seconded by Dr. LeBeuf, the report was adopted as read and the Secretary instructed to cast the ballot of the Association for the nominees.

DR. PERKINS: Under article 4, section 3, I move that Mr. J. C. Smith be elected an honorary member.

Carried.

MR. SMITH: I thank you very much for this honor, which I did not expect. I came near being a physician myself. I studied medicine perhaps before three-fourths of those present today. I studied in '69 and '70, and in '70 to '71. Misfortunes at that time prevented my going on with those studies. While I am not a physician I still have the rudiments of some of the things that physicians know today.

On motion of DR. LEBEUF, the President was instructed to appoint a committee to ascertain why Dr. Barrier was not present.

On motion of DR. P. E. ARCHINARD, seconded by DR. LEBEUF, Dr. Jas. Carroll was elected an honorary member of the Society.

DR. CARROLL: Mr. President, I beg to tender my sincere and hearty thanks for this honor, which I had not anticipated. I assure you that my visit has been exceedingly pleasant.

DR. BUQUOI offered the following resolution:

We hereby protest against the practice of certain life insurance companies in paying less than \$5.00 for any medical examination. We see no reason why a smaller fee should be paid for one examination than for another, since the work is nearly always the same. We cannot further understand why some life insurance companies have been able to maintain a minimum examination fee of \$5.00, while others have not. We note with surprise that, while the ex-

amination fees were being cut down on a plea of economy, all other expenses were enormously increased, although the examining physician is the most important employee of any company, as its failure or success will depend upon the quality of his work.

Moved that the above be adopted. Seconded by DR. MAYER.
Carried.

DR. F. J. MAYER introduced the following resolution:

Resolved, That it is the sense of this body:

First. That in the sanitary centre of yellow and malarial fevers, all fever patients should be screened from the time of the initial chill until free from fever, whenever mosquitoes are present.

Second, That it is the duty of all physicians to report promptly cases suspicious of yellow fever to the health authorities, to the end that the fire may be extinguished before it assumes the proportion of a conflagration; that concealment meets the unqualified condemnation of this body.

Moved and seconded that the above be adopted.

Carried.

DR. DOWLING introduced the following resolution:

Resolved, That sincere thanks be extended to the Orleans Parish Medical Society for the pleasant manner in which we have been entertained.

To the New Orleans Polyclinic and the Faculty of Tulane Medical College for sumptuous luncheons provided and served.

To the Whist, Checkers and Chess Club, and the Young Men's Gymnastic Club for hospitalities.

To the various newspapers for full and complete reports of our daily sessions.

To Tulane Medical College for the use of their halls.

To Dr. Bickham, of New York; Dr. Carroll, of Washington, D. C.; Dr. Sanders, of Montgomery, Alabama, we are indebted for learned and most excellent papers.

To our retiring President, able and competent Secretary and others connected with this department, we acknowledge debts of gratitude.

To Dr. M. J. Magruder and associates we extend heartfelt thanks for their successful efforts in providing for our pleasure and comfort during the three days we have sojourned in your midst.

Amendment, that the names of Mr. J. C. Smith and H. P. Dart be added.

Carried.

(To be concluded next month.)

PARISH SOCIETIES ORGANIZED.

WASHINGTON PARISH MEDICAL SOCIETY.

President, Dr. M. L. Johnson, Hackley, La.; Vice President, Dr. W. J. Jones, Franklinton, La.; Secretary, Dr. J. L. Brock, Franklinton, La.; Treasurer, Dr. W. H. Crain, Varnada, La. The other charter members are: Drs. W. O. Alford, Sunny Hill; J. C. Denman, Richardson; J. E. Pierce, Isabel; A. J. Fortinberry, Dyson; J. M. Brock, Mount Herman.

LAFAYETTE PARISH MEDICAL SOCIETY.

Organized July 23, 1906. Chartered October 9, 1906. President, Dr. F. R. Tolson, Lafayette; Vice President, Dr. W. W. Lessley, Carencro; Secretary, Dr. L. O. Clark, Lafayette; Treasurer, Dr. R. K. Commeaux, Youngsville. The other charter members are: Drs. John Tolson, Franklin Boyd, R. D. Voorhies, J. F. Mouton, H. L. Ducrocq, J. O. Duhon, J. P. Francez, E. Guilbeau, Lafayette; R. O. Young, H. H. Commeaux, Youngsville.

PARISH SOCIETY MEETING.

The Vernon Parish Medical Society had its regular quarterly meeting Wednesday, October 3, 1906. Some important changes were made in the Constitution and By-Laws. Resolutions passed are as follows:

A resolution to amend Art. III of the Constitution of the Vernon Parish Medical Society, so as to make it conform to Art. IV of the Constitution of the State Society, and thereby broaden our scope upon the composition of our Parish Society; such amendment to read as follows:

ARTICLE III. COMPOSITION.

Section 1. This society shall consist of members, honorary members, and guests.

Sec. 2. Every reputable physician in Vernon Parish, who is legally registered in Louisiana, and who is practicing or has agreed to practice non-sectarian medicine, shall be eligible to membership.

Sec. 3. Physicians in other parishes may be eligible as provided for in the By-Laws.

Sec. 4. Men learned in the collateral branches of science may, upon a three-fourths vote of the society, be elected honorary members.

Sec. 5. Any physician, not a resident within the jurisdiction of this society, may become a guest at any meeting upon invitation of the society, and shall be accorded the privilege of participating in all the scientific work for that meeting.

Sec. 1 of Chap. 1 of the By-Laws was amended to conform to Sec. 1 of Chap. 1 of the By-Laws of the State Society concerning the privileges of honorary members, as follows: "All members and honorary members shall be equally privileged to attend all meetings and take part in all proceedings, and, except honorary members, shall be eligible to any office or honor within the gift of the society." Etc.

Here is another amendment to the By-Laws:

A resolution to amend Chap. V of the Vernon Parish Medical Society so as to make it apply to honorary members; also to divide the chapter into sections and to insert a new section defining the time for which dues are payable—such time already being the unwritten law of the State Society.

The amended Chapter reads as follows:

CHAPTER V. DUES.

Section 1. After January 1, 1904, the annual dues of this society shall be \$4.00 per member, of which \$3.00 shall be paid to the Louisiana State Medical Society.

Sec. 2. The annual dues for honorary members shall be \$1.00 per year.

Sec. 3. Dues are payable for the calendar year, from January 1st to December 31st inclusive, irrespective of the date of election to membership.

Sec. 4. Dues must be paid on or before the Annual Meeting.

Sec. 5. Any one who shall fail to pay his dues on or before

the date named shall be held as suspended in this society, and *ipso facto*, from the State Society, and his name shall be placed upon the list of non-affiliated physicians in the report of the State Society for that year, and shall so remain until he is again in good standing.

F. W. DORTCH,
Secretary.

Medical News Items.

LIST OF SUCCESSFUL APPLICANTS FOR LICENSE TO PRACTICE MEDICINE IN MISSISSIPPI.—The State Board of Health announces the list of successful applicants for license to practice medicine in Mississippi as follows: W. R. Arthur, N. C. Womack, W. H. Reid, C. R. Dodds, J. M. Stanley, S. C. Fortenberry, C. J. Marshall, O. A. Lomax, J. W. Chisholm, E. Faulk, H. B. Cowart, D. G. Lemkowitz, J. T. Carr, H. P. Smith, J. Chason, R. A. Gordon, A. O. Deadles, R. N. S. Young, A. M. Wynne, R. A. McReynolds, V. Bonelli, F. G. Stone, L. W. Dotson, S. L. Taylor, J. A. Nash, J. L. Brookshier, W. A. Gowan, C. H. Pinson, L. Lucas, E. L. Fuller, B. T. Orendorf, H. W. Weimer, J. L. James, E. G. Hamilton, J. C. Phillips, L. W. Wilson, J. H. Gipson.

THE CAUSE OF MEDICAL RECIPROCITY.—Dr. Albert Vanderveer, of Albany, N. Y., has done much to advance the cause of medical reciprocity, and now the States of New York, New Jersey, Ohio and Michigan recognize each other's diploma. The basis upon which reciprocity obtains between these States is a license earned *on examination* in either one of them.

HINES COUNTY (Jackson, Miss.,) MEETING.—The Hines County Medical Society had a very interesting meeting on October 10. Besides the local members there were present many members of the State Board of Health.

NEXT MEETING OF THE TRI-STATE MEDICAL SOCIETY.—The next meeting of the Tri-State Medical Society will be held in Marshall, Texas, on November 14-15-16. The President of this Society is Dr. Oscar Dowling of Shreveport, La.

DELEGATES FROM NEW ORLEANS TO THE AMERICAN PUBLIC HEALTH ASSOCIATION.—The following doctors have been appointed delegates to the American Public Health Association to be held in the City of Mexico, December 3 to 7. Dr. C. H. Irion, Dr. A. J. Perkins, Dr. W. G. Armstrong.

DELEGATES TO SOUTHERN CONFERENCE ON IMMIGRATION AND QUARANTINE.—Dr. J. M. Barrier, of Delhi, has been appointed delegate to the Southern Conference on Immigration and Quarantine at Nashville, November 12 and 14. At the last meeting of the State Board of Health the following were also appointed to the same office: Dr. C. H. Irion, Dr. G. W. Gaines and Dr. F. J. Mayer.

THE TRI-STATE MEDICAL SOCIETY CHANGES ITS NAME.—At the annual meeting of this society held at Chattanooga, Tenn., on October 2nd-4th, the society was dissolved by its own action and a new organization was formed which will hereafter be known as the *Southern Medical Society*. The old organization embraced Tennessee, Alabama and Georgia. To these States have been added Kentucky, Mississippi, Florida and Louisiana, and the intention is to embrace members of the profession in the other Southern States. The election of officers resulted as follows: President, Dr. H. H. Martin, Savannah; vice-presidents, Dr. Mack Rogers, Birmingham, Ala.; Dr. J. B. Cowan, Tullahoma, Tenn., and Dr. J. R. Tackett, Meridian, Miss.; secretary, Dr. Raymond Wallace, Chattanooga; treasurer, Dr. Y. L. Abernathy, Chattanooga—*Exchange*.

THE WALTER REED UNITED STATES ARMY GENERAL HOSPITAL.—Plans and specifications have been prepared and the contract awarded for a three-story brick and stone hospital at Washington, D. C., for the United States Government, to be known as the Walter Reed United States Army General Hospital.—*Exchange*.

OVERLYING OF INFANTS.—At a recent inquest held in London in the case of an infant suffocated while in bed with its parents, the coroner stated that about 2,000 infants annually lost their lives in this way in England, there being in the neighborhood of 600 deaths from this cause in London alone.—*Exchange*.

RAILWAY CASUALTIES.—According to a statement issued by the Interstate Commerce Commission, in the course of twelve months

an average of 26 persons were killed and 238 injured a day on railroads in the United States. The total number killed during the year was 9,703, while the injured numbered 86,008.—*Exchange*.

MEETING OF WASHINGTON STATE MEDICAL ASSOCIATION.—The Washington State Medical Association meeting recently in Spokane elected the following officers for the coming year: President, Dr. J. H. Lyons, of Seattle; Vice-President, Dr. E. L. Kimball, of Spokane; Second Vice-President, Dr. E. E. Shaw, of Tacoma; Secretary, Dr. C. H. Thompson, of Seattle; Treasurer, Dr. G. H. Greer, of Tacoma. A number of interesting papers were read, among others one dealing with the Care of the Insane by Dr. G. W. Libby, of Spokane, retiring President of the Association. The conventions will be held as follows: Seattle, 1907; Tacoma, 1908; Spokane, 1909.

LOUISIANA DELEGATES TO THE AMERICAN INTERNATIONAL CONGRESS ON TUBERCULOSIS, to be held in New York, November 14-16, 1906, have been appointed by the President of the Louisiana State Medical Society as follows: Drs. G. J. Sabatier, New Iberia; N. M. Hebert, Covington; S. Abraham, Shreveport; A. A. Allain, Bayou Goula; J. J. Ayo, Raceland; J. M. Barrier, Delhi; J. F. Buquoi, Pte-a-la-Hache; Z. T. Gallion, Natchitoches; A. Guilbeau, Breau Bridge; R. H. Gullledge, Belcher; L. Lazaro, Washington; J. B. Parrott, Noble; O. M. Patterson, Bastrop; J. C. Willis, Homer; T. T. Tarleton, Grand Coteau; H. L. Ducroq, Jeanerette, and the following from New Orleans: Drs. T. S. Kennedy, P. E. Archinard, H. Dupuy, J. B. Elliott, Jr., C. H. Irion, L. G. LeBeuf, S. L. Theard, and G. I. Dempsey.

PERSONAL: Col. W. G. Vincent and Mr. Hunter C. Leake have been reappointed to succeed themselves on the Board of Administrators of the Charity Hospital.

Miss F. M. Quaife, formerly at the Touro, is now at her old home in Orange, New Jersey.

Dr. G. M. Corput has been transferred from New Orleans to Galveston, where he will have charge of the Marine Hospital in that city.

Dr. L. O. Howard, Chief of the Bureau of Entomology at Washington, D. C., was here last month looking after the boll weevil situation.

Dr. H. S. Baketel, representing the Denver Manufacturing Co., paid the Journal a short visit last month.

Among the visiting doctors last month were Dr. P. H. Tetreau, Lafourche; Dr. E. W. Brown, Orange, Texas; Dr. R. M. Butler, Liberty, Miss.; Dr. C. A. Foote, Cheneyville, La.; Dr. A. J. Perkins, Lake Charles, La.

Among those who have recently returned from their vacations are the following: Dr. P. L. Reiss, who has been traveling in Europe for several months; Dr. Edmond Souchon, also from Europe; Dr. H. E. Bernadas, after a month's visit through the principal cities of the West; Dr. A. Weber, from Smithville, Mo.; Dr. Wm. Scheppegrell, from North Carolina; Dr. J. R. Adams, of Algiers, from the North; and Dr. A. B. Gaudet, who spent the month of October visiting the New York hospitals.

Dr. J. A. Danna left recently for a trip to Washington, D. C., Baltimore, New York, Philadelphia and Rochester, N. Y.

Dr. W. Lassiter has returned from Pineville, La., where he has been connected with the Insane Asylum as Assistant Physician.

MARRIED: Dr. Charles Chassaignac and Miss Mathilde Labry were quietly married in Waukesha the early part of October.

DIED: Dr. C. E. Otis died at Hazelhurst, Miss., on October 8. He was a son of the late venerable Dr. E. C. Otis.

Dr. W. E. Todd, at Jackson, Miss., October 13, aged 50 years. Dr. Todd was City Physician for many years, and special officer in all fever epidemics.

Book Reviews and Notices.

All new publications sent to the JOURNAL will be appreciated and will invariably be promptly acknowledged under the heading of "Publications Received." While it will be the aim of the JOURNAL to review as many of the works received as possible, the editors will be guided by the space available and the merit of the respective publications. The acceptance of a book implies no obligation to review.

A Compend of Operative Gynecology, by DRS. W. S. BAINBRIDGE and H. D. MEEKER. The Grafton Press, New York.

This little hand-book, as its title infers, is a description of the technic of the various gynecological operations, and is especially convenient to one who is following the steps of an operation, or studying technic on the cadaver.

MILLER.

Surgical Suggestions and Practical Brevities in Diagnosis and Treatment, by WALTER M. BRINKNER, M. D., and ELI MOSCHOWITZ, M. D. Published by The Surgeny Publishing Co., 92 William, Street, N. Y.

This little book is full of surgical suggestions that furnish valuable information. Whereas, it contains nothing especially new to the surgeon, it calls to mind many practical thoughts and illustrations of surgical condition, both interesting and instructive. It can be read with benefit by any surgeon.

E. D. M.

Golden Rules of Surgery, by AUGUSTUS CHARLES BERNAYS, A. M. M. D. Mosley Medical Book Co., St. Louis, Mo.

Well written, forceful in style, practical in suggestion, most interesting in detail and especially instructive, is this work which the author has so appropriately dedicated to Dr. Chas. H. Mayo of Rochester. The opening chapter should not only be read by medical students, but by those who have under their care the early education of youths destined to take up the profession, not only for surgery, but the pursuit of any art. Each succeeding chapter is but an epitome of good advice based on sound judgment, written by a man whose only personal experience has enabled him to chose from the immense field of surgical literature, the best that is in it.

E. D. M.

General Surgery, by JOHN B. MURPHY, M. D. The Year Book Publishers, Chicago, Ill., 1905.

This small volume (No. 2), of the practical medicine series of year books, edited by Dr. Gustavus P. Head, consists of abstracts from numerous publications on surgical subjects, which will prove of practical benefit to the busy medical practitioner.

LARUE.

Progressive Medicine, edited by HOBART AMORY HARE, M. D., assisted by H. R. M. LANDIS, M. D. Lea Brothers & Co., Philadelphia and New York.

The March number of this digest is replete with information, and unfortunately in a review of this kind we can barely make mention of some of the many valuable articles and excerpts.

In the opening chapter an excerpt from the *Journal of Tropical Medicine*, April 1, 1905, is given of Macdonald's unique case of elephantiasis of the scalp.

Under the head of dysentery, part of Weinie's paper, which appeared in full in the Johns Hopkins' Hospital Bulletin, 1905, page, 73, is given as follows: "Of forty cases in which this organism (shiga bacillus) was found in the stools; twenty-five (62.5 per cent.) gave a positive reaction, and fourteen a negative one, and in one the reaction was not tried until the patient's second admission, when it was positive. Of the negative cases four were less than one week's duration, and one of these reacted later, even to 1:1000; 1:50, and one during convalescence in dilution of 1:20. Of the other seven, one died on the ninth day and the other six were cases of short duration. These details are given to show that the failure of the reaction in so high a percentage of the cases is not so significant as might at first appear. Of forty-two cases of dyspeptic diarrhoea, in which the stools were not examined bacteriologically, fourteen cases gave positive reaction. The earliest appearance of the reaction was the second day. The persistence of the reaction varied, in some cases persisting as long as thirty-nine days. The degree of dilution varies, but in twenty-two cases the reaction was present even in 1:1000, in thirteen cases only up to 1:100.

There is no relation between the severity of the disease and the intensity of the reaction.

We have recently seen three cases of dysentery in the children of the same family; the infection in all likelihood caused by the drinking of water from a shallow well. The first case was that of a small child twenty-two months old, which had frequent blood-mucus discharge and died after an illness of about fourteen days. No examination as made of the stools, nor was the agglutinating power of the blood determined, but

Four days after the death of this child, the two other children of the

From days after the death of this child, the two other children of the family, a boy four and a half, a girl six years old, showed evidence of dysentery. A short time thereafter these two cases came under our care. Examination of the stools in both these cases showed the shiga bacillus, and on the fourteenth day from the onset of the symptoms the agglutinating test was found positive in 1:50. The two patients here mentioned drank of the same water as the case that died, but showed no symptoms of disease until almost eighteen days after the onset of dysenteric symptoms in the first case. The question naturally arises were the last two cases infected from the younger child, or was their power of resistance against the organism, due to their age and strength, the factor that caused the disease to make its appearance later in their cases? These two cases made a tedious recovery.

Morris Manger's report in typhoid perforation, which appeared in the *Jour. A. M. A.*, 1905, is here noticed and is deserving of careful thought.

"In closing, Manger makes the excellent point that the whole trouble with the diagnosis of typhoid perforation in the early stages is that the general practitioner wants too much for diagnosis. It is far better to occasionally make the mistake of operating without there being any perforation, than of frequently operating after the clinical picture has become so clear that the patient has no chance of recovery."

In abstract of MacCoy's paper from the *Jour. A. M. A.*, October 1, 1904, we read:

"Is it not possible that certain pollens coming in contact with the nasal mucosa, thereby acting as stimulants, promote the flow of secretion, and when such secretion is poured out on the surface either, as I stated before, as an irritating secretion or when combined with the pollen, a chemical change takes place and an irritating material is produced? Dunbar's inoculation theory surely favors this statement and agrees exactly with what I have said as to the secretions. Under this class of cases would come the rose cold, the ragweed fever, the horse fever, the hay fever, rye fever, etc. Think of the difficulty of procuring an antitoxin for horse fever! In all such cases I think that the secretion in the predisposing and extravenous material or pollen is an associated factor. As is shown by Dunbar the inoculation method is not successful in all cases. This is easily understood, as the chemistry of the secretions in the various individuals are remarkably different; so that instead of an antitoxin for an exciting factor, use preventive measures by altering the secretion. My new experience surely justifies this statement."

Dr. Braden Kyle says: "There is no doubt that, in some cases, beneficial results have been obtained by the use of Dunbar's serum, or pollantin, but those who have pinned their faith to this remedy as a sure cure for all cases have been doomed to bitter disappointment."

The value of publications such as *Progressive Medicine* is fast becoming apparent to American practitioners.

STORCK.

A Manual of Medical Treatment or Clinical Therapeutics, by I. BURNEY YEO, M. D., F. R. C. P., W. T. Keener & Co., Chicago, 1906.

The fourteenth edition of this manual was issued in England in 1902, but it was not placed before the profession in the United States until 1906.

The many good features contained in the previous editions have been retained. The formulæ in this, the revised fourteenth edition, have been so arranged as to correspond to the last edition of the United States Pharmacopoeia.

Dr. Yeo belongs to that group of therapeutists who, while not believing in overdosing, yet continue to prescribe drugs to cure many pathologic conditions. He stands apart from those who would attempt a cure by that process of mental gymnastics, which is becoming so fashionable with some who would give up the practice of the healing art and join Mother Eddy.

These two volumes contain the experience and judgment of one of the most representative practitioners of medicine in the English-speaking world.

The active practitioner will find these volumes a valuable repository of medical lore. STORCK.

Materia Medica, Pharmacy and Therapeutics, by SAM'L. O. L. POTTER, A. M., M. D., M. R. C. P. (Lord), Tenth edition, revised and in greater part rewritten. P. Blakiston's Son & Co., Philadelphia, 1906.

We consider this one of the best compilations extant in America. The text is so simplified that the average practitioner will find it invaluable as a ready reference work.

Dr. Potter is not a therapeutic nihilist and has the courage to show it in this book.

This, the tenth edition, is practically a new book; nearly four hundred articles have been rewritten, one hundred and thirteen articles and paragraphs have been inserted, and a list of incompatibles for each important drug has been added.

In the section in *Materia Medica and Pharmacy*, the nomenclature of the 1900 U. S. Pharmacopoeia is followed; but, in the section on *Therapeutics*, the familiar trade names of some drugs have been retained. While we do not condemn this plan in whole, we think the better way to familiarize physicians with the U. S. Pharmacopoeia nomenclature would be to print the official titles after the trade names, enclosed in parentheses.

In the review of a former edition of this work, we mentioned some of its many good features. We might add that this edition is superior in many respects. STORCK.

Publications Received.

YEAR-BOOK PUBLISHING CO., Chicago, 1906.

Practical Medicine Series. Head. Vol. VI, *General Medicine*. Billings-Salisbury.

The Practical Medicine Series. Vol. VII, *Pediatrics*, Edited by Isaac A. Abt, M. D. *Orthopedic Surgery*, Edited by John Ridlon, A. M., M. D. With the Collaboration of Gilbert L. Bailey, M. D.

J. B. LIPPINCOTT CO., Philadelphia and London, 1906.

Eating to Live, by John Janvier Black, M. D.

An Introduction to Physiology, by Wm. Townsend Porter, M. D.

International Clinics. Vol. III, 16th Series.

D. APPLETON & CO., New York and London, 1906.

A Text-Book of Human Physiology, by Robert Tigerstedt, M. D. (Translated and edited from Third German Edition, by John R. Mür-
lin, A. M., Ph. D.)

P. BLAKISTON'S SON & CO., Philadelphia, 1906.

A Text-Book of Genito-Urinary Diseases, Including Functional and Sexual Disorders in Man, by Leopold Casper, M. D. (Translated from the German and edited with additions by Chas. W. Bonney, B. L., M. D.)

Stöhr's Text-Book of Histology, Arranged Upon an Embryological Basis, by Frederick T. Lewis, M. D. (From the 12th German Edition, by Dr. Philipp Stöhr.)

LEA BROS. & CO., Philadelphia and New York, 1906.

Progressive Medicine. Hare-Landis. Vol. VIII, No. 3, September 1, 1906.

A Manual of Otology, by Gorham Bacon, A. B., M. D.

Medical Epitome Series. Materia Medica and Therapeutics, by Edward J. Kiepe, Ph. G., M. D.

Chemistry, General and Pharmaceutical, by John Attfield, F. R. S. 19th Edition.

W. B. SAUNDERS CO., Philadelphia and London, 1906.

A Treatise on Surgery, by George Ryerson Fowler, M. D.

CLEVELAND PRESS, Chicago, 1906.

Practical Dermatology, by Bernard Wolff, M. D.

W. T. KEENER & CO., Chicago, 1905-1906.

Essentials of Human Physiology, by D. Noel Paton, M. D. (1905).

Mercer's Company Lectures on Recent Advances in the Physiology of Digestion, by Ernest H. Starling, M. D. (1906).

Practical Text-Book of Midwifery for Nurses, by Robert Jardine.

Kimpton's Essential Series. Essentials of Medical Electricity, by Reginald Morton, M. D. (Henry Kimpton, London, 1905.)

MISCELLANEOUS.

The Teeth and Their Care, by Thaddeus P. Hyatt, D. D. S., (Brooklyn-New York, King Press, 1906.)

How to Suppress a Malpractice Suit and Other Medical Miscellanies, by Thomas Hall Shastid, A. M., M. D. (Marion Publishing Co., Marion, Ill., 1906.)

Second Report of the Wellcome Research Laboratories at the Gordon Memorial College Khartoum, by Andrew Balfour, M. D.

Practical Disinfection. (Circular issued by the Illinois State Board of Health.)

Rhythmotherapy, by Samuel S. Wallian, A. M., M. D. (The Ouellette Press, Chicago, 1906.)

Liberty of Speech and Press Essential to Purity Propaganda; (2) What is Criminally Obscene? By Theodore Schroeder.

Lectures of the Chautauqua School of Nursing.

Prospectus of the Sewerage and Water Board of New Orleans, April 1906.

Rules for Nurses of the Kensington Hospital for Women, Philadelphia, 1905.

Reprints.

A Plea for the International Study of Carcinoma; (2) The Surgical Clinic Today; Its Status and Methods of Teaching; (3) The Needs and Advantages of an International Congress of Military Surgeons; (4) First Aid in the Battlefield, by Col. Nicholas Senn, M. D.

Jaundice in the Newly Born as Evidence of Umbilical Infection; (2) Aseptic Labor and the Obstetric Fee; (3) The Gynecologic Bladder; (4) Puerperal Fever Treated by Uterovaginal Drainage, by Dr. Ernest A. Galant.

The Newspaper and Medicine, by Dr. H. Sheridan Baketel.

A Case of Rattlesnake Bite Treated With Anti-Rattlesnake Serum and With Serum Antivenereum (Calmette); Harmful Intestinal Parasites in Man, by Dr. W. F. Arnold.

Simple Elixir as a Vehicle in Prescriptions Intended for Children, by Edgar F. Heffner, Ph., G.

The Physician as a Character in Fiction, (Presidential Address) by C. B. Burr, M. D.

Report of Two Cases of Cancer Treated With Trypsin Injections and Lotio Pancreatis Locally, by Robert H. Davis, M. D.

The Relation of the Technique of Nurses and of Hospital Apparatus to the Healing of Wounds; (2) Overlapping the Aponeuroses in Closure of Wounds of the Abdominal Wall and Inguinal Herniæ, (3) Myomectomy; (4) Nephrectomy Followed by Pregnancy and Labor, by Charles P. Noble, M. D.

MORTUARY REPORT OF NEW ORLEANS.

(Computed from the Monthly Report of the Board of Health of the City of New Orleans.)
FOR SEPTEMBER, 1906.

CAUSE.	White.	Colored.	Total.
Typhoid Fever.....	7	4	11
Intermittent Fever (Malarial Cachexia) .....	.....	2	2
Smallpox.....	.....	1	1
Measles.....	1	.....	1
Scarlet Fever.....	.....	.....	.....
Whooping Cough.....	1	.....	1
Diphtheria and Croup.....	2	.....	2
Influenza.....	3	1	4
Cholera Nostras.....	.....	.....	.....
Pyemia and Septicemia.....	1	.....	1
Tuberculosis.....	42	29	71
Cancer.....	10	3	13
Rheumatism and Gout.....	.....	.....	.....
Diabetes.....	3	.....	3
Alcoholism.....	1	.....	1
Encephalitis and Meningitis.....	5	5	10
Locomotor Ataxia.....	1	.....	1
Congestion, Hemorrhage and Softening of Brain.....	9	5	14
Paralysis.....	.....	1	1
Convulsions of Infants.....	2	1	3
Other Diseases of Infancy.....	12	1	13
Tetanus.....	2	6	8
Other Nervous Diseases.....	.....	1	1
Heart Diseases.....	23	30	53
Bronchitis.....	3	2	5
Pneumonia and Broncho-Pneumonia.....	6	6	12
Other Respiratory Diseases.....	3	1	4
Ulcer of Stomach.....	.....	.....	.....
Other Diseases of the Stomach.....	2	2	4
Diarrhea, Dysentery and Enteritis.....	22	6	28
Hernia, Intestinal Obstruction.....	3	3	6
Cirrhosis of Liver.....	7	1	8
Other Diseases of the Liver.....	3	1	4
Simple Peritonitis.....	1	.....	1
Appendicitis.....	5	.....	5
Bright's Disease.....	22	16	38
Other Genito-Urinary Diseases.....	1	5	6
Puerperal Diseases.....	4	4	8
Senile Debility.....	17	7	24
Suicide.....	3	3	6
Injuries.....	18	25	43
All Other Causes.....	11	7	18
TOTAL.....	256	179	435

Still-born Children—White, 29; colored, 12; total, 41.

Population of City (estimated)—White, 245,000; colored, 88,000; total, 333,000.

Death Rate per 1000 per annum for Month—White, 12.54; colored, 24.41; total, 15.67.

METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmospheric pressure 29.94
Mean temperature 81.
Total precipitation 7.40 inches.
Prevailing direction of wind, south.

New Orleans Medical and Surgical Journal.

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DECEMBER, 1906.

No. 6

Original Articles.

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. A complimentary edition of one hundred reprints of his article will be furnished each contributor should he so desire. Covers for same, or any number of reprints, may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

On the Origin of Sporadic Cases of Yellow Fever.

By GEO. E. BEYER,

Associate Professor of Biology, Tulane University, New Orleans, La.

Considerable interest on the part of the physicians and the general public is being manifested as to the origin of apparently isolated cases of yellow fever which now and then seem to arise from a perfectly cloudless sky, as it were. Such an event, so contradictory to the explanations of the spread and suppression of the fever given to the public, and largely accepted and acted upon by them, has caused many other questions in connection with it, which during the time of the actual calamity had not arisen. The seeming anomaly of a single case of yellow fever, a case *de novo*, springing up in a locality so far removed from the original center of infection after nearly an entire year, seems to many inexplicable, and may cause a disbelief in the effectiveness of the methods employed in combating and exterminating the disease.

On August 14 a little colored boy, twelve years old, and a native of New Iberia, was suddenly taken ill with fever which subsequent diagnosis established as an unquestionable case of yellow fever. Spontaneous generation having been excluded as an explanation of obscure or unknown causes of origin, the pertinent question arises: How did this case of yellow fever develop after an interval of at least seven months from the occurrence of the last *known* cases of that disease?

For the existence of this disease, three factors are absolutely indispensable, namely, man, the mosquito known as *Stegomyia callopus* (formerly *fasciata*), and the yellow fever germ. As to the germ itself, complete knowledge of its life cycle is not necessary in the present writing, that it is an *animal* organism is universally accepted. In dealing, therefore, with the origin of a disease, due to the invasion of a normal human being by this parasite, we are obliged to take into consideration all three agents that are instrumental in the causation of the disease as well as the conditions that affect their activity.

Biologically considered, every organism is an individual, entitled to obtain from its environments a living of greater or less abundance. The less favorable the environments become, the more necessary is it that the organism should adopt special measures to secure the maintenance of its type under the altered conditions. It is well illustrated throughout life that the weaker the organism is structurally and the less it is capable of individually withstanding adverse influences, the greater is its power of reproduction numerically. Anything that tends to lower the initial vitality of the individual lessens, proportionately, that individual's power of reproduction, and this loss is augmented with every succeeding generation, especially if the organism's environment be limited. In the case of a parasite, the very nature of its environment carries with it a limitation greater than that of any living organism that depends for its livelihood upon a larger domain than is circumscribed by a single host. On the other hand, it has just been stated that the lower or less developed organism depends for the continuation of its race more upon the numerical than upon the individual strength of its progeny. If, again, we combine this fact with the proposition stated above, that the greater the numerical reproduction the

greater the loss of vitality in the offspring, we must perceive that a climax of reproduction can only be reached at certain periods, and that the intervening time must be used for what we might term the rejuvenescence of the reproductive power in that particular species.

Numerous examples of these wave-crests of reproduction might be cited, but more pertinent to the subject at issue we may use for illustration the electric light beetle (*Chalepus trachypygus*), so well known to all of us by its obnoxious invasion of our rooms at night when the lights are lit. Anyone remembering the outbreak and epidemic of yellow fever in 1897, will also recollect the unusual visitation of this beetle during the prevalence of the disease. It is not to be understood by any means that there is any connection between the two incidents; they have absolutely nothing to do with each other, the case is mentioned only to illustrate the period climaxes of reproduction. That beetle, so excessively abundant during that time, has not nearly reached again the numerical strength it manifested then. It may or may not, within the next few years attain again its maximum. Similar climaxes had been reached ten and twenty years previously, but the incidents had not been noted.

Since we are dealing with three animal factors in the causation of the disease, it is evident that the general propositions set forth for one must hold good for all. Normally, therefore, they apply to *Stegomyia callopus* or any other species of mosquito, and with much greater force do they apply to the disease-causing parasite. The greater, then, the numerical strength of the host, the greater the numerical strength of the parasite. The lower the vitality of the host, through excessive reproduction, the weaker must be the parasite, not only numerically but physically as well.

By reference to the foregoing it is clear that for the occurrence of an epidemic the following conditions are necessary: a climax of vitality and reproduction on the part of the parasite and of its transmitter, and a sufficient number of non-immune hosts, for it is known that a human being is subject to but one attack of the disease. Should at any time any one of these conditions be unfulfilled, the resulting expression of the disease will necessarily be of a reduced character. The less the number of infected transmit-

ters the less must be the number of infections, no matter how great the vitality and numeric strength of the parasite. On the other hand no matter how great the numeric strength of the transmitters and the less the number of non-immune hosts the less again will be the number of infections. It has been experimentally demonstrated that the bite of one contaminated mosquito produces, as a rule, but a mild case of the disease, while the bites of more than two are necessary for the production of a severe or a fatal case. In one instance, however, the bites of four infected mosquitoes resulted in only a mild case, and the bite of a single one in death. This illustrates the fact that the infection of the insects themselves, with the parasitic organism, must have been one of degree, nevertheless, no matter how slight in degree, the infection in kind existed, and the subsequently invaded host became infectious to new mosquitoes in the same degree. The greater, then, the initial infection of a mosquito through a severely infected human being, the greater will be the transmission of the etiologic factor and vice versa.

It is necessary here to notice other conditions that affect the vitality of insect life, namely, climatic changes. Any lowering of temperature will produce a corresponding depression in vitality. As has already been stated, the physiologic condition of the host reacts upon the parasite, and, therefore, the manifestations of the invasion of a human secondary host, by such a vitally depressed organism, will be proportionately slight, and would clinically present the picture of a mild case. At times also, and in yellow fever by no means infrequently, the pathologic conditions may be so slight as to be unnoted by the infected patient himself. These instances of scarcely noticeable indisposition are known as the walking type of the disease which, however, are fully capable of being transmitted from one person to another. The working parties of the Yellow Fever Institute in Vera Cruz encountered numbers of these cases, and in the third Memoir of the French Commission to Rio de Janeiro*, Marchoux and Simond cite that the physicians of that city believed these aborted cases to be either la grippe or some gastric trouble, entirely foreign to yellow fever. Yet, when these same cases were subjected later on to the bites of contaminated mos-

* *Etudes sur la fièvre jaune, Troisième Mémoire, pp. 31-32.*

quitoes, none of them showed any signs of the disease, although the number of contaminated mosquitoes (5-8), used in the four cases experimented with, would unquestionably have resulted in the death of non-immunes.

From the foregoing explanation it must be seen that this recently reported and isolated case of yellow fever in New Iberia is merely the outcome of a more or less extended series of unrecognized, because milder, cases. It may be fairly assumed that all the epidemics which have visited this city and this country in the past, were due to the introduction and dissemination of the disease in an unrecognized phase for some time before its true nature had been determined.

This undoubtedly held true when the visitation of 1897 was ascribed primarily to the now famous Gelpi case. Last year's epidemic originated in just the same way, but it was not until the disease had assumed all of its characteristics that the public at large could fasten the blame for its introduction into our midst upon the health officers. The warning note against the dangerous walking type, as stated already, so frequent in yellow fever, had been sounded as early as the month of May. Had the warning been heeded and one of the three factors mentioned in previous pages been suppressed, that is, had the mosquito crusade been carried on then, the recognizable phases would, in all probability, never have occurred.

Having analyzed the conditions necessary for the origin of the disease and the contingencies which may control its dissemination, an attempt may now be made to answer accordingly the, at present, pertinent question: Where do isolated and sporadic cases come from?

This may be done by two ways of deduction; the first is the theory of so-called recrudescence, and the other that of re-importation. Against the former two main objections have been raised. One of them is the belief that "never in the history of the fever here has it ever been carried over from season to season." The second is the doubt that a contaminated *Stegomyia* could hibernate and afterwards transmit an active yellow fever germ. In reply to the first objection it may be answered that the disease occurred for two successive years after the epidemic of 1897; that it happened

again this year, and that in the past, prior to 1878, it was of standing yearly recurrence. To the second objection, answer may be made that some of Reed's and Carroll's experiments were made with mosquitoes which had been contaminated in the fall, and used for experimentation the following spring.

The fact that the experiments referred to took place in Havana, Cuba—five degrees farther south than New Orleans—may be advanced as an argument against the hibernation of the adult *Stegomyia* in our climate. It must be admitted here that actual experiments which have been attempted to hibernate mosquitoes, have so far been unsuccessful for various reasons. In the first place it may not have been possible to create artificially just such environments and conditions as the insects may require to pass over the ever varying temperatures of our winter months. That other mosquitoes (*Anopheles* and *Culex*) do live through the winter in freedom is well known; our duck hunters can testify to that. Yet, individuals of these two kinds of mosquitoes brought to the laboratory invariably died after a cold night or two, and consequently, no satisfactory results could be achieved. Up to date the same experience has been noted with *Stegomyia* in captivity. After capture they lived for a week or so, but on the arrival of the first cold spell they were found dead in the jars. Yet it is evident that the first *Stegomyia* appearing on or after the first warm days in spring must be hibernated insects for this reason. The earliest data for the appearance of *Stegomyia* have been for four consecutive years as follows: 1903, March 26; 1904, April 2; 1905, March 29; and 1906, March 10 and March 25. *But larvæ prior to these dates have not as yet been noted in freedom.*

In connection with this early date of March 10, it must be explained that the first mosquitoes (about 10) were brought to the City Board of Health after Dr. Kohnke had advertised the offer of a reward for the first living *Stegomyia*. These mosquitoes were taken, so it is claimed, from an imperfectly protected water barrel in Henderson's Sugar Refinery in a place close to the machinery where the temperature, year in year out, remains practically the same. Larvæ, I have been informed by Dr. Kohnke, were not found. The second date for this year (March 25, Chenet's College), represents about the real date of first appearance of *Stego-*

myia under ordinary conditions. The offer of reward by Dr. Kohnke had been in force ever since the first one was made, and it must be admitted that if the first date had been one of ordinary occurrence, the second one should have come earlier than 15 days, notwithstanding the fact that the mosquito destruction had been in force for about eight months, for the appearance of the third *Stegomyia* occurred on the 28th, only three days after the second. The report was made from the Progressive Union.

It may be fairly safe to assume that numbers of females of the last fall-generations enter into a more or less complete state of hibernation. Whilst we have just considered the possibility of hibernation of the adult insects, we must not forget the almost proven probability of the hibernation of the eggs. Incidentally it may be mentioned here that if one of our observers and investigators here had suspected the presence of some 150 eggs glued to the sides of a nearly empty aquarium, he would have then been able to affix positive data to the surmise and to establish thereby the fact of egg-hibernation. When early this spring this observer filled the aquarium with salt water from Lake Pontchartrain the eggs hatched. That *Stegomyia* could breed in salt water had been experimentally shown and announced publicly as early as 1904. The instance related above is a splendid corroboration *de naturae* of the experimental findings.

In connection now with the hibernation and recrudescence another possibility must not be overlooked, and that is the still to be proven one of transmission of the parasite from parent through her offspring. It is hardly necessary here to enter into the details of the only case known and which is fully related by Marchoux and Simond in their second Memoir (Pages 4 and 5). As stated just now, this possibility has to be proven again under much more rigid conditions. The case, as related, leaves open too many loopholes for speculation upon a natural infection prior to the second experimental one, especially, as the first attempted inoculation had been negative.

In the first place all actual experimenters agree that the least time required for the mosquito to become infectuous is twelve days; we have further seen that, under certain climatic conditions, this capacity to infect may be deferred for several days (assuming five as a

large margin), then the average period would be fourteen and a half days from the imbibation of the blood from man to arrival in the salivary structures. That these latter only are the storage place whence the infectious agent can be transmitted is amply proven by the anatomical structures and the mechanism of the proboscis of the insects. (*)

It must be conceived that part, at least, of the time required for the development of the parasites was already consumed in the mosquito before they could have reached the unripe ova of that insect, at least, structurally it would appear to be impossible that the parasites could enter at any other than the very earliest stages of maturity of the eggs. Assuming that further development was suspended in the egg and larva and was not resumed until the insect had reached the pupal stage, why should not the imago be able to transmit the parasite at the end of fourteen days, and why should additional eight days have been necessary to accomplish infection?

Supposing a female *Stegomyia* had fed on a yellow fever patient on July 11, she would then deposit her eggs on the 14th—three days later (taking the average between two and six days), the new generation would appear in ten or twelve days, on July 24 or 26 respectively. To this time already elapsed, another day, at least, must be added before a mosquito's mouth parts are hardened sufficiently to feed on a human being, and this same time also is constantly taken up by the frequent efforts at copulation, for it is the new-born female's main business to secure the fertilization of her eggs first, and to look for blood to mature them afterwards. Consequently, fully sixteen or eighteen days—and more than the time required for the development of the parasite—would have elapsed and the progeny of the infected mother mosquito should be capable of transmitting the disease even immediately after their birth.

In the case related by Marchoux and Simond, however, a further extension of fourteen days is added and at the end of the total period of 30 or 32 days the insects fail to infect the non-immune patient. Eight days later though, that is after 38 or 40 days, the evolution of the parasite is apparently completed for the manifestation of the disease is noted on the fourth day after the last bite of the one remaining mosquito.

*See NEW ORLEANS MEDICAL AND SURGICAL JOURNAL, Vol. 56, pp 805-826.

Now the question is: What has the yellow fever germ been doing all this time of forty days?

There is yet another question to be answered in connection with the foregoing and that is: Can an infected mosquito lay matured eggs at all? For, while the insect may have become contaminated on a yellow fever patient it may not necessarily become infectious, in fact, if the parasite of yellow fever does enter the egg structures would its presence there not disturb the cell arrangement to such a degree as to preclude the further development of the future insect? Thus far not enough is positively known, and to our present knowledge, only one other set of experiments in connection with the transmission of the yellow fever germ from mother to egg has been made. The results are said to have been negative.

However, all these questions are of such vital importance for the successful stamping out of the disease that all possible chances of error must be eliminated.

It is well known that the various localities in which the disease broke out during last summer and fall (1905) did become infected successively, and it is almost certain that in some of these places the mosquito campaign was not as successfully conducted as in New Orleans. This assertion is by no means meant as a reflection upon the efficiency of the health authorities of those localities, for the scattered state of the racially mixed and uneducated population may have deterred them from annihilating the disease-carrying insects. If in any one of these infected places contaminated mosquitoes remained alive and cold weather forced them to hibernate, it naturally follows that on the occurrence of the first warm spell the mosquitoes would emerge from their retreats and seek a meal of blood.

It is evident from what already has been said that at this time of the year the vitality of the insects is lowest, and that its parasite, the etiologic factor of yellow fever, is in a correspondingly depressed state of vitality. Introduced at such a time into the body of a non-immune, it could produce under such conditions only an aborted and mild form of the original virulent disease. Should this form of the disease, at this time, occur in a Caucasian, recognition may not be possible, even by a medical man, for, in the first place the disease is not only *not suspected* but *not expected* because it is

believed *not* to be indigenous to our climate. How easily then will such cases escape detection when they occur among the colored laity? Reverting here to our New Iberia case, it really is a splendid piece of diagnosis for reason of the unsuspected appearance of the disease and the absence at its beginning of some of the principal features which were obscured by the racial characteristics of the patient, until others of the symptoms had become pronounced enough to set aside all doubts as to the identity of the disease.

As has been mentioned before, the aborted and unrecognized walking types, originating in the manner we have just shown, are fully as capable of transmitting the disease as is a severe or fatal case. Subsequent changes of temperature may not only trend to retard the development of the parasite in the insect, but force the insect itself to seek again a secure retreat against the inclemency of the weather.

That a sudden and continued low temperature does cause a retardation of the development of the parasite seemed to be illustrated during the experimental work of Working Party No. 2, of the Yellow Fever Institute in Vera Cruz in 1903. A number of mosquitoes were fed on a fatal case on August 3 at 9:30 a. m. The temperature at the time was normal for Vera Cruz, averaging about 28.2 degrees for five days. On August 9, however, a norther sprang up and caused a drop of more than three degrees, this temperature persisted until August 13, when, gradually, it began to ascend to normal. During this period of about five days all of our mosquitoes were comparatively inactive and sluggish. On August 15, 3 p. m., two of these contaminated mosquitoes, which were then twelve days and seven hours old, were allowed to feed on a non-immune. No symptoms of infection, however, developed. As it was the desire to produce an experimental case of fever without delay, and the one just related failed, another attempt with another non-immune and another set of four mosquitoes, fourteen days old and also contaminated on a fatal case, was made, but the result was negative as well. As the contamination of this second set of mosquitoes was effected at the same time as the first, that is: just prior to the advent of the norther mentioned above, it was concluded then that the negative results had been due to a retardation of the development of the parasite, and that its infective phase had not had sufficient time to reach

the glandular structures of its host. While the parasite is undergoing its first stages of rejuvenescence, the secondary cases of the disease at that time of the year may be but little more pronounced than the first and, consequently, their identity not being suspected, they will again escape detection. It may not be before the completion of three, four or even more cycles that the disease will assume once more a recognizable form. Having once attained its virulence, its spread becomes now doubly assured by the more numerous and—because of the higher and more favorable temperatures—more vital disseminators. Of course, it must be borne in mind that the primary host, man, has not been idle in the meantime, but has exercised, blindly for years before Reed's discovery, intelligently afterwards, effective measures to control the development of the parasite by the destruction of its secondary hosts.

This much for an attempt to solve the question at issue by the recrudescence theory. Should it be the true solution it would deal a blow at our belief that yellow fever has not been indigenous to our Southern shores.

Now then, the explanation of the origin of any and all cases—even sporadic ones—by re-importation, does not require any scientific analysis. Given the three factors and we may have one or more cases of fever. The trouble is, there does not always appear a reasonable connection between the original home of the disease and the first victim here. The New Iberia case is an example. It is certainly possible to trace contact with infected localities south of us by the imaginary establishment of unauthorized and unguarded intercourse. Smuggling between Central and South American ports and points along our coast is believed to be carried on at all times and, consequently, a case of fever may reach our own immaculate shores at any time. Poor little Guildmare Mouton, who never left his native New Iberia, is an illustration of the direct importation theory.

It must be reiterated here that this New Iberia case was the recognized outcome of one or more obscured infections priorly existing in the town itself or not very far from it. As both sides of the argument have favorable points of their own, they share, however, conditions which are subject to the biologic laws discussed.

For the safety and preservation of our health and commercial success there is but one answer to make: Destroy the secondary host and "Recrudescence or Importation" need no longer worry us.

A Few Remarks on Malarial Hematuria.

By B. O. LEBLANC, M. Ph., M. D.

Health officer of Iberville Parish, and Physician to the La. State Convict Farm, St. Gabriel, La.

It is not my object to claim anything new or original in this brief article, but merely to bring a most important subject up before the profession of Louisiana again. A subject that has practically no literature, and one that has been a "stumbling block" for physicians in this State as well as in all other malarial districts for years. Malarial hematuria has been very little studied, hence very little is known of it.

Etiology.—It is claimed by some that anemia is the chief causal factor. Some claim its cause to be an unknown bacillus. Others hold that quinin given in large doses for malaria produces it. Notwithstanding all these theories it has been conclusively demonstrated that the blood invariably shows the presence of the estivo-autumnal parasite on microscopical examination. To my mind it appears, however, that from toxins, or some toxic substance present in the circulation, produced by the parasite itself, such destruction of red blood corpuscles ensues; that the hemoglobin is set free in the blood in such enormous quantities that the liver cannot dispose of it and hemoglobinuria. The jaundice is undoubtedly a toxemic and not an obstructive one. The early vomiting and irritable and congested stomach, all point to a toxemic disease.

Symptomatology.—The disease usually occurs in individuals who have had repeated attacks of malaria. It very rarely occurs as a primary affection. The onset is almost always abrupt, and, accompanied with a sever rigor, profuse vomiting, intense body pains, soon followed by pains in the head and extremities. The vomiting in many cases is very obstinate, owing to sever congestion of the stomach. There is also congestion of brain, liver and kidneys. Sometimes the congestion of the kidneys results in nephritis, and we have Bright's disease as a sequel. The conjunctivæ are suffused, and the face is flushed.

The fever may vary greatly in different cases; the type may be intermittent, remittent, or continuous. Most usually it is of the continuous variety, and rarely going very high, ranging, generally, from 100-103°. Jaundice is a constant symptom, occurring early in the poroxysm, and becomes most intense during the febrile stage, and continuing a few days after the termination of the paroxysm. The pulse is at first rapid and tense in correlation with the temperature, then it becomes slow and compressible as the jaundice appears. (Similar to Faget's Law in yellow fever).

The urine is usually acid in reaction. Early in the disease the urine is generally light red in color, owing to the presence of hemoglobin. This soon deepens, however, until later it becomes dark brown, or almost black, and there is a dark brown sediment deposited upon standing. This color is slightly tinged with green, and the urine frothy upon shaking, due to the presence of bile. The amount of urine is greatly reduced, and at times almost entirely suppressed. It of course shows the presence of albumen. In severe cases hemorrhages from nose, mouth and bowels, occur, and these can be well looked upon as of ill omen.

In some sever cases delirium is present.

Prognosis.—This is always grave, but patients, when taken in previous fairly good health and without complications, should recover. It very often terminates favorably when the outlook is very bad. Cases with a least murmur, no matter which form, invariably die. You can make a fatal prognosis in every case complicated with any kind of organic heart disease. The prognosis also depends upon the amount of bloody urine, the less blood passed the more favorable the prognosis. It is the only guide to the amount of disintegration going on in the blood stream. When a very large quantity of bloody urine is voided, the patient usually succumbs, not from hemorrhage of the kidneys as some think, but purely from the want of enough healthy blood to maintain the system. Another guide in reference to urine is the sediment that deposits upon standing. If, on tilting the chamber, dark grains somewhat resembling gunpowder are observed adhering to the sides, a recovery almost always follows, but if it simply stains the sides dark it is just the reverse. I can't really say the composition or cause of this sediment, but this is a fact from a clinical observation.

Treatment.—Here is where the profession splits on the subject, some say, never give quinin under any circumstances, as it increases hemorrhage; others say give it in large doses. If quinin actually causes the disease rather than to be its specific, as some go so far as to say; tell me why, that since the physicians administer so much of the drug and even the laity take it themselves in malarial districts, we see very little of this once dreaded, malignant form of malaria? Fifteen to twenty years ago, when quinin was not used extensively in malarial communities, it was very prevalent.

Those who oppose the administration of quinin give hypsulphate of soda, tr. ferric chloride, turpentine, and a score of other drugs.

An older practitioner of this neighborhood, who has been practicing for 25 years, and has had a vast experience with malarial hematuria, has always been a strong advocate to quinin and pursues the following treatment with marked success:

First, a large dose of calomel, grs. xv-xx, followed in 6 hours by a saline, Epsom or Rochelle salt. Quinin, grs. v, every 4 hours, preferably hypodermetically. Ergotin (Bonjean's), by same method, every 4 hours. Turpentine, m. x, 3 or 4 times daily for first few days if the stomach will tolerate. In my limited experience I have used first the dose of calomel as mentioned above (same dose), followed in 6 hours by the saline. Quinin bisulphate, grs. xxx to xl, per day, by needle in two portions, say 4 to 5 hours apart. Ergotin, also by hypodermic injection; in fact, no medicine by mouth, except the purgative. Withdraw food first 48 hours, except very small quantities of milk and lime-water. Iced water with bicarbonate of soda (in proportion of a teaspoonful to quart of water), for the early stage of the disease. Encourage copious draughts, this neutralizes the acid condition of stomach and relieves congestion, thereby allaying vomiting. After 48 hours I allow a regular liquid diet. For the first 48 to 72 hours the stomach is very irritable and congested, in fact, very much the same as in yellow fever, and will rebel against food and medicine. I use the calomel to relieve the congested liver and probably to eliminate toxins from the intestinal canal.

Quinin, to act directly on the parasites and their toxins in the blood which, when destroyed, assists the disintegration of the blood and checks hemoglobinuria. Ergotin, I use simply as a safe-

guard. If the hemorrhage comes from the kidneys, as some believe, it may do good, if not it is useless. I see no special use for anything else, unless it be to treat complications that may arise.

If the patient recovers I use arsenic and iron. Arsenic to help destroy any estivo-autumnal parasites that may remain after the battle, and to combat anemia, and the iron to combat anemia. My preference in this, as well as in other forms of estivo-autumnal fever is the following:

R. Liq. potass arsenitis ʒiiss

Sol. ferric manganese peptonate (P. D. & C.) O i

M. & Sig. Tablespoonful in water 3 times daily for adults; children, according to age.

In conclusion will say that this short article was written from my point of view, and I would be more than pleased to hear the opinions of some of my confreres on the subject.

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P. L. Thibaut, M. D., Chairman.

A Summary of our Knowledge Concerning *Stegomyia Fasciata*.

By MR. J. C. SMITH, New Orleans.

Since the discovery that some mosquitoes are the transmitters of disease, this class of insects has received the renewed attention of entomologists, with the result of increasing the number of species from less than 150 known at the time of this discovery to nearly 400 now known and described for the world. Of this number, 37 are recorded for the State of Louisiana, two of which are of special interest to the sanitarian—*Anopheles*, the transmitter of malarial fever; and *Stegomyia*, the transmitter of yellow fever. With the latter only is this paper concerned.

The evidence which convicts *Stegomyia fasciata* as the transmitter of yellow fever is found in the experiments made by the American Commission at Havana in 1900 to 1902; by Dr. Juan Guiteras at Havana in 1901 and 1902; by Drs. Ribas and Lutz at Sao Paulo in 1903; by the Working Party, Nos. 1 and 2, of the Yellow Fever Institute of the U. S. Marine Hospital Service Vera Cruz in 1903 and 1904; and by the French Commission at Rio de Janeiro in 1903 and 1904. These experiments were afterwards corroborated by a crusade against this mosquito, which resulted in eliminating the fever from Havana, Vera Cruz, and Rio de Janeiro, and in keeping under perfect control the fever in New Orleans last year.

Culex fatigans, or *pungens*, which is apparently a synonym, is a mosquito which is found constantly in the houses in company with *Stegomyia fasciata*, and in abundance wherever the latter prevails; therefore it is perfectly natural to suspect this *Culex* of sharing with *Stegomyia* the ability to transmit the fever.

The observations made in Petropolis by the French Commission are thoroughly conclusive that *Culex fatigans* is not a transmitter of yellow fever.

No history of this discovery of the connection between mosquitoes and yellow fever can be complete without including mention of Dr. J. C. Nott, of Mobile, Ala., and Dr. Carlos Finlay, of Havana, Cuba. To Dr. Nott is due the honor of first intimating the probable connection between insects and the spread of yellow fever, while Dr. Finlay was the first to experiment with mosquitoes in connection with yellow fever.

It must be admitted that experts, using the most approved laboratory technic, have been unable to find the yellow fever parasite in the body of the mosquito. The French Commission has succeeded in finding several animal parasites, apparently normal to uninfected *Stegomyia* and their larvæ. It also reports several vegetable parasites, which I am strongly inclined to believe are not parasites, but undigested food. In 1903 I examined more than 100 uninfected *Stegomyia* taken in New Orleans, and was unable to find any trace of an animal parasite.

In Central and South America, this mosquito has been reported only for the eastern coast as far south as 45 deg. Until quite recently it was also supposed to be confined to the eastern coast of

Mexico, but Dr. Howard reports that it has been recently found inhabiting the Pacific coast of that country. It is found all through the West Indies. Its range in the United States, so far as reported, is given by Dr. Howard in his recent report of the work of the Bureau of Entomology. He says:

“Within the limits of the United States the permanent breeding region of the yellow fever mosquito is practically confined to all of the Southern United States which border on the Atlantic Ocean and the Gulf of Mexico, with the exception of those portions of Virginia, North Carolina and South Carolina, Georgia and Alabama, which constitute the foothills of the Appalachian chain; in other words, Western Virginia and North Carolina, the extreme northwestern corner of South Carolina, the northern part of Georgia, and the extreme northeastern corner of Alabama. Further than this, the permanent breeding region includes the western half of Tennessee and Kentucky, the extreme tip of Illinois, the southeastern corner of Missouri, and all of Arkansas except the northern portion. It also includes portions of the Indian Territory and southern Arizona, and there are points in Utah, Nevada and California where, if once introduced, the species will undoubtedly thrive with sufficient water supply. In addition to this general region, in the autumn there are extralimital occurrences of this insect which, carried upon boats up the valleys of the Mississippi and Ohio Rivers, may at certain points find convenient breeding places and may, during the autumn, exist for one or more generations. In the same way on the lines of certain railroads there are also extralimital breeding places where in the autumn the insect may exist for a longer or shorter time and breed; thus it was found in the autumn of 1904 breeding in St. Louis, Mo., and it has also been found in Jeffersonville, Ind., on the Ohio River; also at Knoxville and Nashville, Tenn., and at Lexington, Ky. The northern line of permanent distribution, however, coincides fairly accurately with the northern limit of the lower austral life zone as determined by Dr. Merriam, of the Biological Survey of this Department.”

The altitude at which this mosquito is found is limited only to temperature and water conditions, and one may say that its presence anywhere is only limited by these two conditions and its introduction. The French Commission reports there are no *Stegomyia* in

Petropolis, and that no case of yellow fever has ever originated there, although the town is only about thirty miles from Rio de Janeiro, where the fever has prevailed for years.

Petropolis is at an altitude of 830 meters (2,500 feet) and the Commission considers its immunity due to the low temperature which prevails there during the nights.

Working Party No. 1, of the U. S. Marine Hospital Service, says that within the last six years yellow fever has been epidemic at Cordoba (altitude 3,000 feet), and also at Orizaba, the altitude of which is 4,200 feet. Evidently the temperature and water conditions of these two cities are favorable to the propagation of *Stegomyia*.

It is agreed by all authors that this mosquito does not wander far from its place of birth.

In this community it is generally believed that *Stegomyia* is more active during the day than in the night. This is erroneous. It is one of the mosquitoes that bite in the daytime, but according to my observations for some years its most active period is during the night—from dusk to early morning—especially when the nights are very warm. The French Commission concluded that only the recently hatched females bite during the day. However true that may be for free *Stegomyia*, we know it is not so with those in captivity, for all the experiments made by the different commissions were made in the day-time.

The French Commission made some very conclusive experiments which I believe will hold good for all localities. It determined that at a temperature of 80 deg. to 86 deg F. this mosquito showed its greatest activity; at 60 deg. F. it became sluggish and ceased to feed, while at about 53 deg. F it became torpid.

From my own observations I can say that temperature has very much influence on the frequency of copulation among these insects. From 79 deg. F. and up I have seen this act many times during the day and night; with a lower temperature the frequency of this act is very much diminished. Prof. G. E. Beyer assures me that this has been his experience. The French Commission admits that it has seen this act but twice, and therefore concludes that it occurs only in the night-time.

Temperature also affects in a very decided manner the laying and hatching of the eggs. The laying of the eggs, as I have observed it, takes place in this manner: The mosquito attaches itself to the side of the vessel containing the water—which may be near its body or an inch from it—and from this position it drops its eggs singly on the surface of the water, this act sometimes occupying several hours. The number of eggs laid may vary from 25 to 150, and the larvæ may develop from them in from ten hours to eight or more days, according to the temperature. Morgan and Dupree say that “the sinking of the eggs and low temperature, as well as the rapid evaporation of the water of the pools on which the eggs are laid, produce, in a marked degree, variations in the time of hatching. Eggs of *Stegomyia* have been influenced to the extent of months in the time of hatching by one or other of the above conditions.” They also say that agitating the water which contains the eggs will hasten their development, and in this way account for the apparent increase in the number of mosquitoes after a rain.

After copulation, and from 2 to 4 days after taking a meal of blood, the mosquito lays its eggs.

All authors but one agree that a meal of blood is essential to this mosquito before she can lay her eggs. Dr. Dupree, the only exception, says that he has succeeded in getting *Stegomyia* to lay eggs without a meal of blood, the insect being fed only on banana, sugar and dried dates.

This mosquito is generally considered a house mosquito. I do not know whether anyone has ever made an effort to determine positively if it is not found outside. They do lay eggs in our ditches and are developed there, but the proportion of *Stegomyia* to *Culex fatigans* bred in our ditches may be guessed at when we remember that the latter lays from 200 to 400 eggs, while *Stegomyia* lays from 25 to 150. I believe it is a house mosquito only because it finds all the necessary conditions for its sustenance and propagation there, and that a change in any of the conditions would result in a change of its habits. It must be remembered that *Culex fatigans* is, at any rate, at all times as abundant in our houses in New Orleans as the *Stegomyia*, and that it also develops in our cisterns. By this I mean that *Stegomyia* is not the only mosquito with a so-called domestic habit.

As evidence that *Stegomyia* elsewhere have habits differing from those we know of here, I will quote from the First Report of the Wellcome Research Laboratories on the mosquitoes at Khartoum. Speaking of *Pyretophorus costalis*, *Culex fatigans* and *Stegomyia fasciata*, it says: "*Stegomyia fasciata* is the most troublesome insect in Khartoum—it bites viciously even in the heat of the day. Its prevalence is to be attributed to the presence of so many steamers on the Blue Nile, for *Stegomyia fasciata*, as has often been pointed out, is an excellent traveler along with *Culex fatigans*—it has been found breeding in large numbers in the bilge water, tank water and engine room water, of the river steamers. The French Commission says this mosquito may lay its eggs in brackish water."

On March 11 I noticed some fifty or more *Stegomyia* larvæ in a brackish-water aquarium (not containing any fish) in my library. These larvæ were from eggs certainly laid during the latter part of last year. Great care had been taken at my home and in all the neighborhood to screen the cisterns, do away with all water-containers, and to fumigate thoroughly. A few *Stegomyia* were noticed in my house even after all these precautions, and I attributed their presence to faulty screening, not suspecting the aquarium until I found the larvæ this March. These larvæ were duly hatched and afforded me some very early material for experimentation. The facility with which these *Stegomyia* changed their habit of laying their eggs in fresh water, suggests, very forcibly, how easily they may adapt themselves to changed conditions, and teaches that screening cisterns and abolishing all water-containers not screened, will not solve the problem of exterminating the *Stegomyia*.

The above-mentioned mosquitoes—many of which were males—were fed with banana and sugar water. On April 11 I placed in the jar with them a stender dish containing rain water, so as to afford them an opportunity of laying eggs without a meal of blood. The males were observed a number of times doing their duty, and at the end of two weeks no eggs were laid. Two males and two females were then placed in another jar and a stender dish of rain water with them. They were starved for two days and then given their first meal of blood and promptly on the second day after, I found 60 odd eggs. These eggs were then transferred to brackish water, and on the third day after developed into larvæ.

These experiments show two results: 1st. That a meal of blood was essential to oviposition; and 2d., that the eggs hatched rapidly after being transferred to brackish water.

Three days after they were again fed and in a dish containing brackish water was placed with them. Three days after, eggs were taken from the brackish water and transferred to rain water, and four days after the eggs were hatched.

Two other males and females were then placed in another jar with two stender dishes, one containing brackish the other rain water. The females were then given their first meal of blood and immediately after the males were fed with sugar water. Three days after, both dishes contained eggs.

This last experiment demonstrated clearly that *Stegomyia* makes no selection of water in which to lay its eggs; that it is not the dainty creature we had supposed. Morgan and Dupree say that "larvæ of mosquitoes are not so fastidious in their food habits as they are reputed to be, but that water saturated with fecal matter will shorten the larval period of many species. *Stegomyia* under such conditions completed the life-cycle in from six to eight days."

Absolutely nothing is known as to how long a mosquito will live in freedom. The American Commission kept an infected mosquito for 101 days, while the French Commission succeeded in keeping some females for 106 days and males for 50 days. Dr. Guiteras kept some for 154 days.

If recrudescence of yellow fever be a fact, then it must be accounted for by the hibernation of infected *Stegomyiæ*, the inheritance of the parasite by the daughter of an infected *Stegomyia* or both of these means.

There is absolutely nothing known positively as whether the *Stegomyiæ* hibernate or not. Whether or not the progeny of an infected mosquito inherits the yellow fever parasite is still an open question. The French Commission claims to have succeeded in producing a well-marked but mild case of yellow fever from a daughter of an infected mosquito, while the Working Party No. 3 of the U. S. Marine Hospital Service, experimenting here in New Orleans last year, was unable to produce a single suspicious case after carefully testing 13 non-immunes with mosquitoes raised from the eggs laid by infected mosquitoes.

In the course of this paper I have used the specific term of *Stegomyia fasciata* Fabricius as applied to the yellow fever mosquito and a name which has become universally known since the epoch-making experiments of the American Commission in Cuba. Quite recently, in collating the literature of the Culicidæ, Blanchard has found that the name *fasciatus* had been given by de Villers in 1789, and by Meigen in 1804, to another insect of the same family. According to the latest rules of zoological nomenclature, the *fasciatus* of Fabricius becomes a homonym and therefore not usable. The first subsequent name applied to this exact species is that of *calopus* Meigen will thus hold and it would perhaps be as well to bear this in mind. The name *Stegomyia calopus* has been adopted by the U. S. Bureau of Entomology in its latest bulletins dealing with the mosquitoes of this country, which have come to hand only within the past few days.

DISCUSSION.

DR. GUTHRIE: I received a copy of the last report of the French Commission in Rio Janerio. They determined the time of the activity of the mosquito as being between five in the evening and seven in the morning. Another fact was that the female stegomyiæ deposited seven different sets of eggs after seven different feedings. I think attention should be called to that fact.

DR. DABNEY: After my attention was called last year to the biting habits of this mosquito, I had occasion to notice very carefully the time of biting. On one occasion a mosquito lit on my hand about three o'clock. It was a well-marked stegomyia, and I took it to the school where I was going. I think there is a great deal of misinformation in regard to this, as I have several times seen them biting along in the middle of the afternoon. The fact that the common mosquito usually bites in the night and that the stegomyia bites in the day-time has caused some to come to the conclusion that it does not bite at night. I have known them to bite between eight and nine o'clock in the morning, also between three and five in the afternoon. I know they will bite at most any hour and they will bite at most any time of night. I would like to ask Mr. Smith whether he thinks the depth of the water has anything to do with the life habits of these mosquitoes. I noticed

in the deeper cisterns that the wigglers do not seem so plentiful, and I have almost come to think that if they kept eight feet of water in their cisterns, that when the wigglers go to the bottom they would drown before they could reach the top again. I do not know whether that is true. It is hard to get wigglers in deep water, but in shallow water it is quite easy. I mention this because I consider it an important point. There are a great many shallow cisterns and during the recent dry spell nearly one-third of the cisterns were put out of use.

DR. MONTEGUT: We had a great deal of yellow fever in my section last summer, and I have seen the *stegomyia* and have had some experience with this question of day-time or night-time. Two instances show that they do bite in the day-time. A young lady went to church about ten o'clock. A mosquito bit her on the neck and she asked her friend to kill it. It was a *stegomyia*. A few days afterwards they sent for me. She had high fever. The next day black vomit and on Friday there was complete suppression of urine and she died.

I do not think that in this very interesting paper he has stated the temperature that it takes to kill the *stegomyia*. I have had them under thirty degrees for twelve to twenty-four hours, and they were not dead. They lived two weeks after being subjected to this temperature, at the end of which time they were destroyed. I was not able to get a lower temperature on account of the defect of my ice chest. I think that is an important point, especially when we have a mild winter. I have lately found *stegomyia* in several houses. The idea that the first frost kills them I am not in position to accept. I had yellow fever as late as the 25th of December. As late as the 11th of January, 1906, there were three typical cases in one house, thereby strengthening the assertion just made.

MR. SMITH: What we do not know about the *stegomyia* amounts to a great deal more than what we do know. I do not know anything about this point brought up by Doctor Montegut as to the temperature that it takes to kill the mosquito, or what effect the frost has on it, but will make some experiments. However, that is only of biological importance. Every dead mosquito leaves something like one hundred and fifty eggs behind.

DR. MCGEEHEE: We had a little experience in one of the laboratories where we were experimenting. We had a jar in which we put some sand containing some eggs. We set this jar away during the cold weather. This spring we poured some water on this sand and it hatched out a great number of *Stegomyia*. That makes me think that we have a great problem before us. If we can keep the female from getting sick we will have accomplished a great deal and will then have gotten rid of yellow fever.

DR. CARROLL: Of course the remarks of Dr. McGehee show that the *Stegomyia* eggs became attached to the jar and in all probability remained there in a dry state until the fresh supply of water was added and then they hatched out. We have experiments recorded showing that they may survive for several months. As to the temperature conditions we carried on a rather extensive series of experiments. You can place the insects in a refrigerator and they will be benumbed, but will revive readily when taken into a warm room, and will bite readily. We could repeat this, but after several benumbings they finally died out.

In regard to the period of incubation of twelve days. I doubt very much that the infection resulted from that bite after an incubation of that length of time. I think the patient was bitten later by another mosquito which was not observed. Although the French Commission did report cases of longer periods of incubation, these subjects had previously received injections of serum drawn from yellow fever patients, and it seems quite likely that this had some effect in delaying the infection. I know of no uncomplicated mosquito case where the period of incubation was prolonged more than six days and seven hours. I have enjoyed the paper very much. I would appreciate it very much if Mr. Smith would let me have a few of the eggs so that I can take them back with me for the purpose of experimentation.

DR. BASS: In regard to mosquitoes biting in the day-time I am prepared to give one striking instance of infection from daylight biting. Last year a woman went from New Orleans to Vicksburg, stayed there a few hours, not supposed to be sick, went to Tallulah, La., arriving after 10 a. m., and left before 2 p. m. same day for Lake Providence. She felt badly and lay down across the bed of an Italian merchant at Tallulah. Arriving at Lake Providence she

died of yellow fever a few days afterwards. Sixteen days after her arrival at Tallulah the Italian in whose house she had stopped took yellow fever, and from the infection by this woman in the day-time grew a dreadful epidemic in the town. No other source of infection has ever been suggested. The mosquitoes in this instance became infected between 10 a. m. and 2 p. m.

DR. COURET: We have had occasion last summer to do some work on the etiology of yellow fever at the Charity Hospital. We tried to obtain the parasite from the mosquito. We found the same parasite as described by Vera Cruz Working Party No. 1, and Mr. Smith, and after careful study, concluded that it was a yeast gotten by the mosquito in feeding on banana. Infected and non-infected mosquitoes fed on sugar and water, did not show these cells.

DR. MAYER: In the question of the sanitary control of yellow fever there are two factors to be considered, the conveyance of these factors to a focal point is necessary to bring about a case of yellow fever, viz.: The mosquito and a yellow fever patient. Dr. McGehee has suggested that the proper remedy would be to prevent the mosquito from becoming infected; this is the Havanese theory, and really the one upon which our quarantine is based, and would be in a measure correct, were it not for the fact that a chain is no stronger than its weakest link. Havana, still acting on this theory, continues to be infected, the growing expansion of this port makes it still more difficult to shut out all avenues of infection in despite of the fact that the State maintains well-equipped quarantine stations, because our reticulated waterways opening into the Gulf makes smuggling possible, and for the further reason that close rail communication with other States, where the precautions taken are not as rigid as in Louisiana, make us peculiarly liable to infection by the backdoor, as in 1905. The true theory is to exterminate carriers of the disease—the mosquitoes—and destroy their breeding places. This, of course, is no easy task, but with an educated public opinion it is not impossible. Nothing within the bounds of reason is impossible for Americans to accomplish. The mosquito was placed on this earth by the All Wise Ruler of the Universe for the purpose of teaching us our sanitary duty. I believe we can get rid of mosquitoes by a complete topographical

survey of the State, followed by a comprehensive system of drainage, reclamation of swamp and marsh lands, which will add thousands of acres of valuable lands to our assessment rolls; by sewerage of cities and towns; by the abolition of overground water containers; by screening and oiling, and the enormous initial expense will pay for itself in less than a decade.

The great port of New Orleans stands upon the threshold of a development, that the wildest flight of the imagination cannot now foresee with the opening of the Isthmian Canal. Her geographical position entitles her to be not only the entreport of the Mississippi Valley and Latin-American trade, but of the Oriental trade, about which the nations of the old world are constantly flying at each others throats. This trade expansion carries with it increased danger of importation of yellow fever. Our Gulf Ports are really not guarded sufficiently; and the only way to negative the growing and ever-increasing danger is to inaugurate and carry into execution a broad and comprehensive system of sanitation until we can reach that point where we can throw our doors wide open and receive the world, isolating those that are sick, hence the absolute necessity for sewerage, drainage, paving, screening, oiling, isolation hospitals and detention camps, and all those other measures embraced in the modern science of maritime and inland sanitation.

DR. SIMS: I want to report another case of day-time infection. The first case in our city was that of a young lady who visited Port Barrow, across the bayou. It was proven that she had not been out of the city excepting on this day. That visit was between two and four in the afternoon. She returned to Donaldsonville and four days later took down with yellow fever. That was the only time during a period of two months that she had left the city. There was no infection until she went across the bayou and brought it back.

DR. SMITH, in closing: With regard to the supposed parasites mentioned by Dr. Couret, I examined these slides and found it to be nothing but ingested food. I do not know that I have anything further to say.

Orleans Parish Medical Society Proceedings.

President, DR. C. JEFF. MILLER.

Secretary, DR. AMEDEE GRANGER.

141 Elk Place, New Orleans.

In Charge of the Publication Committee, DR. AMEDEE GRANGER, Chairman,
DRS. GEO. S. BEL and E. H. WALET.

MEETING OF SEPTEMBER 8, 1906.

DR. S. C. LANDAUER read a paper entitled:

"Grafting of the Cervix as a Cure for Ulceration."

You are all more or less familiar with the subject of grafting, and I have chosen this as my subject to-night. Grafting, not as ordinarily done, but the substitution of mucous membrane instead of the skin and, as far as I am aware or can ascertain from references to the various medical journals, this is the first time the subject has ever been brought up for consideration.

Grafting, as a means of curing simple ulceration of the cervix where caustics have failed, will sometimes be successful; but before discussing this novel procedure, let us look into the accepted opinions as to the causation of ulceration of the cervix. Authorities differ on this very important question. Some extremists claim at least ninety per cent are of gonorrheal origin; others go to the other extreme and aver that only ten per cent, are of gonorrheal origin. From my own experience, both at Touro and in private practice, I should say that the former percentage is more nearly correct; and I don't think I have ever seen a case which has not been at least suspicious of having started in this manner, although we cannot say positively that gonorrhea is the cause where the microscope fails to reveal the gonococci. Nevertheless a thorough and searching inquiry will prove a history of infection of some kind.

Now, naturally, before we try to treat the symptoms we must find the cause and endeavor first to remove it; in other words, we

must not try to treat ulceration of the cervix until we have done away with the purulent acid secretion which is continually bathing the ulcerated parts, and consequently keeps them irritated.

Some of you will say, when we cure that, we will cure the ulcer; no, not always, and it is just in these cases that I believe my plan of grafting is advisable. Carry out the same ideas, which hold good in all skin grafting cases. For instance, if you have a large surface of the leg, arm or body with a raw surface which shows no tendency to heal, you would not keep stimulating the ulcerated part with silver when you saw that this method brought no good results. On the contrary, you would try grafting by one of the numerous methods which have been suggested, and the same principle holds good for grafting on the cervix.

But bear in mind that in these operations asepsis plays a very important part. The operation itself is very simple and anyone can do it.

My plan of procedure is as follows:

First, I have the vagina douched with hot bichloride, 1 to 5,000, and afterwards packed with iodoform gauze; then I have the pubes shaved and dressed with bichloride dressing of the same strength. The next morning, remove both packing and dressing and again douche the vagina, using sterile water or saline solution, and treat the pubes in the same way.

When I first tried this operation I used no anesthesia whatever, but found subsequently that I could do far better work by using 2% cocain solution. I saturate a cotton pledget and introduce into the vagina and leave it there for half an hour, and am then ready.

As to instruments, one needs only a self-retaining speculum, two pairs of tenacula forceps, a couple of sponge holders, a needle holder, two fully curved fine needles, a pair of long-handled rat-tooth forceps, two pairs of scissors, one curved on the flat and one on the angle, both with long handles, a scalpel and, for sutures, fine catgut, either chromicized or plain. Upon my first attempt at grafting, I tried Reverden's method, with epithelium from the soles of the feet and the palms of the hands. But this method failed. Then I tried the Thiersch method, but with no success. Finally I tried grafting some strips of vaginal epithelium by the sliding

method and this proved entirely successful. I held the piece in place by sutures of fine catgut, and to prevent too much tension on sutures I packed the vagina, using pressure on the side opposite to the graft, so as to cause the cervix to deviate to that side. By using four sittings, one week apart, I succeeded in entirely covering a large ulcer involving all the cervix, at least an inch long.

Altogether I have tried this method in three cases, one of which only was entirely successful; but my patients in the other two cases stopped coming and I lost sight of them and can say nothing definitely about them.

But my success in this one case is sufficient to warrant me in bringing this procedure to your notice, and I believe you will agree with me that it deserves adoption in those cases for which I have advocated it. The advantages I claim for this method are: 1st, the ease of performing the operation, as anyone can do it; 2d, it is plastic and feasible under cocain anesthesia; 3d, it is non-mutilating; 4th, the patient does not have to remain in bed; 5th, it represents progression.

DISCUSSION.

DR. CHAVIGNY: The procedure is one that is entirely new and very unique. It would strike me that when an ulcer was put into such a condition as to allow grafting, we would have accomplished very nearly a cure, and possibly in a few more weeks of treatment we would have a cured ulcer.

It seems to me very difficult to get an ulcer in such a condition as the graft would take, without taking into consideration the great number of bacteria which are normally found in the vagina.

From my experience with cervical ulcers I would be inclined to say that a report of so few cases would hardly be sufficient to allow us to take seriously such a unique procedure.

DR. SALATICH: Did Dr. Landauer leave the pieces of mucous membrane attached after the grafting, or did he sever them?

DR. CLARK said he did not believe that the unique procedure suggested by the essayist would be considered seriously by men of practice and experience in this line of work. He doubted very much whether the graft would take on a cervix continually bathed in acid secretions. Further, he thought that if the cervix and vagina could be fairly aseptized, there would be no need for

grafting, for under those favorable conditions the ulceration would certainly heal without that. One must distinguish between ulceration and erosion or an eversion of the cervical mucous membrane, which is by far the most common condition and would require no such treatment as that recommended for ulceration.

DR. MILLER said that the method was very unique, but he could not conceive of a condition of the cervix calling for such a procedure. Ordinary erosions seldom call for treatment. Such conditions always meant disease higher up and the erosions and ulcers promptly disappear when the cause is removed. The exciting factor may be chronic gonorrhea, septic disease of the tubes, or cystic degeneration of the cervical glands resulting from cervical injuries. Certainly none of these cases would be benefitted by grafts. Grafting mucous membranes is uncertain under the best conditions, especially the vagina. He doubted the utility of the operation.

DR. LANDAUER, in closing: Grafts cannot take place unless the parts have been first treated and the causes of the ulceration removed. The grafting should only be done when the ulceration persists, after treating all the underlying conditions and the cure of the leucorrhea, etc.

He admitted that his experience with the method was not large enough to allow him to state positively what results could be expected from it; but he believed that the results thus far obtained were encouraging and warranted further trial and investigation.

PRESENTATION OF CASES.

DR. HERMAN B. GESSNER presented *a colored boy, aged 19 years, on whom he had done a resection of the elbow* by the posterior median incision some 7 (seven) years before. The indication was tuberculous disease of the joint. Within 3 months a secondary operation was done, considerable portions of the forearm bones being removed; indeed, nearly all of the radius. Fortunately, the periosteum was preserved, the lesion being mainly an osteomyelitis. Bone tissue was largely reproduced. Subsequently several (four) operations were done for recurrent disease in the humerus stump. At present the patient presents the upper extremity of a small boy, with a few scabs over granulating sores corresponding to the lower

end of the humerus. The limb is an extremely useful one, with a wide range of movements. Attention was called to the shiny, oily skin of the patient's face, a sign of good nutrition in the negro. In spite of his excellent general health the "*Locus minoris resistentia*" in the humerus has persisted and may yet give trouble.

DR. HATCH complimented Dr. Gessner on the good results he had obtained. He was very glad to have seen that case, as he was especially interested in conservative bone and joint surgery. He wished to know if the doctor had had a skiagraph made since the operation; if not, one should be made, as it would help materially in finding out the tubercular bone foci which caused the discharge which was still present, and make the curetting of the diseased area an easier and more certain procedure.

DR. GESSNER did not feel as sanguine as Dr. Hatch about the case and the good results to be obtained from the curetting, but feared that he would have to do that before long.

MEETING OF SEPTEMBER 22, 1906.

DR. C. W. ALLEN read a report of

A Sudden Death with an Unexplained Symptom.

September 2, I was called to see Mrs. T., *aet* 56, widow, a small, frail woman, who, however, told me she had never been sick and never had taken any medicine.

She had been in town about one week house hunting, and was somewhat fatigued and exhausted by the heat; her diet had been restricted, as she had not been able to obtain what she relished.

She had been in bed two days, and feeling badly for a day or two before. As her bowels had not moved the day before she took a tablespoonful of oil; this affected her 4 or 5 times that day, and they had continued loose.

Careful examination failed to reveal any symptom whatever except that her temperature was 100° F., pulse 96, with a rather weak heart action, but absolutely no discomfort anywhere. I prescribed a little strychnia, caffein and quinin in small doses every 4 hours, and gave suitable directions about diet.

The next day her condition was practically the same. The next evening I was hurriedly summoned and arrived at 7 p. m., found

her suffering great pain in the knees. Examination showed no swelling or other inflammatory symptoms, and movement did not increase the pain; it was clearly reflex but from where I could not make out. The abdomen, pelvis and back were negative, the circulation in the limbs good, with no arterio-sclerosis. Her facies were those of intense pain. She asked for a hypodermic and moaned frequently. I did not have my hypodermic with me and told her so, but promised relief. Temperature 100° F., pulse 104, and slightly weak. I prescribed several powders, each consisting of caffein citrate, gr. $\frac{1}{6}$; codein sulph., gr. $\frac{1}{4}$, and aspirin, grs. x, with instructions to repeat in one-half hour, but not to give more than two before I returned.

At 9 p. m., after the above powders, the last one hour before I called, the conditions was but slightly improved, pain almost as severe and the pulse seemed slightly weakened, temperature $99\frac{4}{5}^{\circ}$ F. I at once gave her a hypodermic of strychnin, gr. $\frac{1}{30}$; morphin, gr. $\frac{1}{4}$, and atropia, gr. $\frac{1}{150}$. For $\frac{3}{4}$ of an hour there was absolutely no effect on the pain, but the effect on the circulation was apparent, the pulse became fuller, stronger and slightly slower.

We placed hot water bottles about her knees and covered them with a blanket to try the relaxing influence of the heat, but with no apparent benefit. Forty-five minutes from the time of the first hypodermic I ave her another consisting of morphia, gr. $\frac{1}{8}$, and atropia sulph, gr. $\frac{1}{150}$. The pain at once became affected, leaving by intermissions and returning, but less frequently each time; it had entirely disappeared in about twenty minutes. Patient drank a glass of milk and went to sleep, lying on her right side, curled up with her hands under her face. She was watched through the night, spoke to her daughter when aroused, said she felt comfortable. She was last observed at 6 a. m.; seemed to be sleeping, her breathing seemed regular.

Shortly after 7 her daughter tried to rouse her but could not, and thought she looked peculiar.

I arrived about 8.

She was dead, still warm, was lying exactly as I had left her the night before, in which position she had remained throughout the night; death had evidently but recently occurred.

The cause of death as well as the pain in the knees I am at a loss to explain; it had evidently been instantaneous without pain, and not preceded by any discomfort, otherwise there must have been some change in position.

I had considered the possibility of impending cerebral trouble when looking for a cause for the pain in the knees, but it did not seem probable.

That death could have been the result of some idiosyncrasy from the medication I can not believe, as it would not have occurred so long afterwards without having produced other symptoms.

That the pain was due to some commencing circulatory disturbance, though not apparent at the time, controlled by the medication, to recur later in sudden arrest of the heart seems the most probable.

MEETING OF OCTOBER 27, 1906.

DR. W. A. DUREL read a paper entitled

Results in Some Cases of Pulmonary Tuberculosis Treated by the Sanitarium Method.

In classifying the cases reported in this paper, I have divided tuberculosis into five clinical stages. This classification, I find permits a better division of cases clinically, and enables one to follow better the disease in its different stages.

I have adopted this classification in placing and rooming my patients at the Sanitarium, so keeping together all cases in the same clinical stage.

Let us go over briefly these different stages: Patients included in the first clinical stage give a history of slight loss in weight; impairment of appetite; and some disturbance in the digestion: though the stomach remains good in the majority of these cases; loss in general strength; history of exposure to contagion.

Temperature record shows little variation in the temperature—subnormal in the morning to a rise of a few tenths in the afternoon. Patient rarely coughs or expectorates, unless bronchitis complicates the disease.

Physical examination gives localized interrupted breathing;

feeble, blowing, or harsh respiration localized; increase in the expiratory movement; no rales, but a stickiness in the respiration upon deep inspiration, or coughing.

No bacilli are to be found in the sputum. If the above physical signs are not in sufficient evidence for a diagnosis, the use of the tuberculin test, with a positive reaction, will leave out all doubts as to a positive diagnosis.

Second Stage. There is a greater loss of weight than in the former stage; there is some cough and little expectoration; some indigestion, though the process of assimilation still remains fairly good; there is some anemia; flushes in face, and feeling of heaviness in chest at times; there is loss of general strength; the temperature record shows a rise from one to one and a half degree. The temperature is often subnormal in the morning. Pulse is rapid and rises upon the least exertion, and after meals.

Physical examination gives: Increased fremitus and dullness over small area, or part of a lobe (in the majority of the cases reported here, the most frequent seat of the lesions was in the upper lobe, and on the left side.)

Besides the above we have increased voice sounds; fine crepitant rales on deep inspiration or coughing; prolonged respiration; and a roughness or feebleness in the respiration.

Bacilli are not always found in the sputum. In the cases reported here, bacilli were found in three cases.

Third Stage. Marked emaciation, anemia; rapid pulse and respiration; shortness of breath upon least exertion; indigestion prominent and prevalent, often associated with diarrhea, or excessive constipation; cough is troublesome and expectoration is plentiful. Temperature subnormal, in the forenoon to 100, 101, 102 in the afternoon. Generally we have a history of several attacks of pleurisy in these cases.

Bacilli and the pus germs are found in the sputum. Physical examination gives: Dullness over one or more lobes; subcrepitant rales, and mucous rales, with sometimes "mucous clicks," small at localized points; diminution in lung expansion on affected side, and increased expansion and hyperresonance on the sound side. Some retractions and restrictions in chest. Complete absence of voice sounds or respiration at some points, followed by gurgling and mucous clicks, upon coughing and expectoration.

Fourth Stage. Great emaciation and marked anemia; severe indigestion, with vomiting and often diarrhea; great loss of strength; cough very troublesome and expectoration very profuse; temperature subnormal in the forenoon to 100, 101, 104 in the forenoon and afternoon; rapid respiration with dyspnea upon least exertion; rapid and weak pulse; bacilli and pus germs in large numbers in the sputum.

Physical examination gives: Dullness over large area of one or both lungs, with cracked-pot resonance and hyperresonance at different localized points, varying from a 25-cents piece to size larger than a silver dollar; inspection shows marked restrictions and depressions in the chest; generally both lungs are involved.

We also find, upon auscultation, large mucous and subcrepitant rales, with numerous mucous clicks. Amphoric breathing, and gurgles at several localized areas.

Fifth Stage. Patient is so emaciated he has to remain in bed, or is barely able to walk about; assimilation is bad, and most any food will disagree with the patient. Expectoration is profuse, and cough is very troublesome. Temperature 100, 101, 104; pulse feeble, and dyspnea marked. Bacilli and pus germs in large numbers in the sputum.

Physical examination gives flatness and dullness over greater part of both lungs; cracked-pot resonance in large areas; amphoric breathing, with large and coarse mucous rales and clicks over large areas of both lungs.

So much for the clinical division of the different stages of pulmonary tuberculosis.

In giving this report of cases treated by the sanitarium-method of treatment, I will first give the results of those cases which have remained under treatment the required time, and until discharged by me.

The other cases not remaining at the sanitarium, or under treatment the required time, I will report separately.

Of the 22 cases remaining under treatment until discharged, as apparently cured, three were in the first clinical stage; six were in the second clinical stage; eight were in the third clinical stage; five were in the fourth clinical stage.

Of the three in the first clinical stage, one was given the tuberculin test, with positive reaction. Of these three cases, one gained

10 lbs., the other 14, and other 32 lbs. Two remained seven weeks under treatment, and one three months. Treatment in each case consisted of rest, super-alimentation, as further described, creosote, and various other measures entering into the hygienic and sanitarium treatment of these cases.

The Watery Extract of T. B. was used only in one of these cases. Of the 6 cases in the second stage, the lowest gain in weight was 17 lbs., and the highest gain was 46 lbs. The average gain, 30 lbs. The shortest time any of these cases remained under treatment was six weeks, and the longest time was five months.

The treatment in these cases was the same as in the former stage. Symptomatic treatment was instituted in each case as symptoms presented themselves. The Watery Extract of T. B. was used in 5 of these cases. Super-alimentation was a difficult matter in four of these cases, as one suffered with atonic dyspepsia, and the others were habituate small eaters.

Of the 8 cases in the third stage, the lowest gain in weight was 8 lbs., and the highest 90 lbs. The average gain was 35 lbs. The shortest time any of these cases remained under treatment was 4 months, and the longest 7 months.

Four of these cases ran high temperature—100, 102 and 103, and consequently had to be kept in the open-air, and under perfect rest in the reclining posture for a period varying from 8 to 16 weeks. No exercise was permitted until all temperature had disappeared for a month. The rest of the treatment consisted in the same as in the other previous mentioned cases. Bacilli disappeared from the sputum of these cases in from one to four months.

Of the 5 cases in the fourth stage the lowest gain was 32 lbs., and the highest was 73 lbs. The shortest time any of these cases remained under treatment was five months, and longest time was nine months. All these cases (fourth stage) ran a high temperature, ranging from 100 to 104, which temperature lasted from four weeks to five months in some cases. The treatment in these cases consisted in the same as the above cases. Bacilli disappeared in these cases in from three to five months. Here again it was a difficult matter to superaliment these cases, as most of them suffered with indigestion. It was with difficulty that many of these cases could be made to understand that much depended upon their over-feeding. One of these cases was particularly difficult to superaliment, as the excess-

ive coughing she had, caused her to vomit her meals and eggs; and it was with difficulty and much persuasion that I could make her take another meal immediately after vomiting the first one.

Besides these twenty-two above reported cases, which have remained under treatment the required length of time, and until discharged as apparently cured, I have had other cases which have been admitted to the sanitarium, and, after remaining under treatment some length of time, have left for some reason or other, before completing their treatment. Of these cases we have admitted fourteen to the sanitarium in the fifteen months that we have been open for the reception of cases. Of these fourteen: Three were in the second stage; and eleven were in the fourth stage.

Of the three in the second stage: all gained over 20 lbs., and had greatly improved in their lung lesions before leaving. Upon latest information I understand that all three of these cases followed their treatment at home, and have been pronounced as well or apparently cured by their medical adviser since the past few months.

One of these cases was particularly interesting, as it was complicated with tuberculosis of the tongue. Upon leaving the lesions on the tongue had most entirely disappeared, and I understand that the patient is not a sufferer at present of these lesions on the tongue.

Of the 11 other cases in the fourth clinical stage: Four had gained over 25 lbs. before leaving the sanitarium, and I understand that they have continued to improve since. (Two of these cases have been declared as apparently cured since leaving the sanitarium.) Two others have died since leaving the sanitarium. One was an old lady of 62, who developed tubercular nephritis four months after leaving the sanitarium, and the other was only a few weeks at the sanitarium, and remained home one month before his death.

As you have seen from the above, of the thirty-eight cases which have been treated by the sanitarium-method of treatment, which we follow at the Louisiana Tuberculosis Sanitarium, in Covington, La.; the twenty-two cases which have remained under treatment the required length of time, have all been discharged as apparently cured. That is, these cases present at the present time no appearance of any active lesions in the lungs; have no temperature rise; have no bacilli in the sputum; feel perfectly well, and most have

returned, since a year ago, to their daily occupations; and have gained in weight since returning to their homes.

Of the other *fourteen* cases not remaining the required time to accomplish a cure, five of them have been declared well in the past months, and the others, with the exception of the two deaths, have kept on improving steadily since leaving the sanitarium.

The method of treatment followed in all the above mentioned cases, consisted of rest in the open-air, until all temperature had disappeared for one month and the circulatory apparatus had returned to its normal state. The question of forcing a patient to rest is not a "mere trifling matter." It is only by strict sanitarium discipline that we can have our patients to take the proper rest. If not under your continuous surveillance, patients will not take the proper rest.

Superalimentation is another important measure in the treatment of the tubercular. It is most impossible to super-aliment a tubercular, if you do not have him under your continual surveyance at each meal, and at the "between meal" nourishment. The cases at the sanitarium are given three meals a day, with 8 to 12 eggs during the intervals between each meal.

Besides rest and super-alimentation I use "cold spongings," chest exercise; creosote and lactic acid inhalations; creosote internally I use quite extensively, and only in one case had I to stop its use entirely, after three months. Some of the cases reported above have taken as high as 40 drops of creosote three times daily; and with all beneficial results. The average dose taken is 15 drops three times daily. I always watch the kidneys closely during the administration of creosote. As for the evil effects on the stomach reported by many, I fail to find them in the great majority of my cases.

As above reported the use of Watery Extract of Von Ruck has been used in the majority of cases. I attribute a great deal to Wat. Ext. T. B. that none of the above cases, discharged over one year, have yet relapsed.

In concluding this report, the facts which I wish to bring forward mostly are: First. That the majority of the cases reported here were in the 3d and 4th clinical stage of the disease. Second. That most of the cases had been depending upon some climatic influences alone, before entering the sanitarium. Third. That all of the latter cases had not improved under simple climatic and

without rigid treatment influences. Fourth. That in the treatment of pulmonary tuberculosis more than mere climatic influences, and "roughing it out" are necessary for the accomplishment of successful results.

Another factor for which I feel I cannot plead with you sufficiently, is the fact that an early diagnosis is most essential for the tuberculous.

In the reading of this report you have noticed that the further advanced was the disease the longer length of time had the patient to remain under treatment, and the less were his chances of recovery.

Another factor which I wish to bring out here, is the infection of the disease. I am glad to hear that our Health Authorities are taking steps against the spread of this dreadful "White Plague" in our Crescent City. I mention this fact relating to the infection of the disease; because most of the cases reported here give a most positive history of direct infection, either through parentage, or through their daily exposure in our infected stores, factories, public places, and private domiciles.

I have already discussed the preventative treatment in tuberculosis in previous papers, and will refer you to these articles, for the reading of the precautionary measures we have adopted at the sanitarium.

In conclusion, I will close by saying that:

1st. The above is the first report published, giving the results in the cases of pulmonary tuberculosis, treated at the Louisiana Tuberculosis Sanitarium, in Covington, La.

2d. That, though the cases reported are a few, the results gotten have been as satisfactory as any results reported from any other place.

3d. That the above results show again that it is not necessary that we have a high altitude to accomplish successful results in the treatment of tuberculosis.

4th. That by the combined hygienic, dietetic, rest and open-air treatment; under rigid and strict sanitarium surveillance and discipline; with the aid of different medications and the use of culture products; we have obtained the satisfactory above reported results.

DISCUSSION.

DR. ELLIOTT, JR., agreed with the essayist on the question of rest. He does not any more advise patients to go out West on a ranch and rough it out. During the past summer he visited the Otis Sanitarium, where he saw as many as 375 cases in one room. These patients slept in round dormitories, in which there were 40 openings. These were open day and night, summer and winter. Thirty patients slept in each dormitory. They were fed three times a day, given eggs between meals; made to rest, but no medicines or injections whatever. The best treatment he thought was super-alimentation, sometimes olive oil between meals, and absolute rest in all cases with fever. The latter he allowed to get up and about moderately at first, of course, one week after all fever was gone. He was glad to hear that as good results could be obtained in Covington as out West or in higher altitudes. Would like to know whether Dr. Durel uses the Von Ruck water extract in all his cases, or only in selected ones; and in the latter, when did he give it?

DR. PATTON: The subject of Dr. Durel's paper is one of absorbing interest to the general practitioner. The importance of making an early diagnosis is so great that he would like to hear from Dr. Durel what he considers some of the earliest casual symptoms, and especially how much importance the Doctor attaches to subnormal temperature in the early morning, a point which is not dwelt upon by many text-books, but which Dr. Patton has found fairly constant. Also whether Dr. Durel's experience bears out the observation made by others that in incipient phthisis the quickened pulse rate is but little influenced by position. Also the Doctor's method of administering the watery extract and the large doses of creosote which he gives.

DR. HEBERT said he had nothing to add, but desired to reiterate the remarks made by Dr. Elliott, Jr., on the subject. Two years ago, while in Boston, he saw the treatment of rest and open air carried out. So much stress was laid upon the question of rest that patient were not allowed to enter into a class unless they consented to observe absolute rest, if necessary. Over there no medicines were given. The patients were divided into classes and each furnished with little books containing directions and in which they

were to jot down notes on their cases, and those who were sufficiently intelligent took their own temperature and kept a record of same. Twice a month, each individual class would report to the hospital and the meeting was on the order of a social function rather than a clinic for the discussion of physical infirmities. They were in the open air at least 22 hours, rain or shine. The world over sanitarians agree upon the importance of lots of fresh pure air.

DR. TRAHAN was of the opinion that there should be a difference in the results from the treatment of patients of tubercular parentage, or of tubercular cachexia, and the accidental tubercular cases. He thought that the former needed the climate conditions and that in Louisiana they would not do well in spite of any form of treatment. The latter cases, he would expect to do especially well in sanatoria. He would like Dr. Durel to state whether or not he had found a difference in the results of treatment in these two classes of consumptives.

DR. DEMPSEY had the pleasure a few days ago of talking on the subject to Dr. Campbell, of San Antonio, Texas, who has been the head for the past six years of a sanitarium for tuberculosis. The doctor stated that he was now using very extensively and was getting very good results from what he called the extraction method. This consisted in administering to the tuberculous patient the juices of vegetables and meats, in that way doing away with the indigestible pulp. These juices were obtained from passing the vegetables or meat in presses made for the purpose.

DR. O'REILLY believed that Dr. Dempsey did not quite understand Dr. Campbell. The "vegetable and fruit juices" of which Dr. Campbell spoke, were administered with a view of influencing the scorbutic condition which he found so frequently in tubercular patients, and which, remaining after a cure of the tubercular lesions proper is the frequent cause of relapse, after all treatment had been stopped, and when the physician felt reasonably certain that the patient was cured.

The treatment of tuberculosis could be summed up as follows: Look for and remove underlying diatheses, outdoor life, forced feeding and iodized oils.

DR. DUPUY: The essayist sounded a hopeful note, which means that in our own climate of Louisiana we can master tuberculosis.

In the last two years in hospital practice he had seen over thirty cases of tubercular laryngitis in which the lung condition was not too far advanced. Some of these cases picked up wonderfully, in spite of poor surroundings, under the hygienic and forced feeding treatment, plus local treatment of the laryngeal lesions. The weight in some of these cases increased 15 to 20 pounds, the tubercular lesions in the larynx and the bacilli tuberculosis disappearing. He is firmly convinced of the fact that both pulmonary and laryngeal tuberculosis can be cured in Louisiana when an early diagnosis is made and the proper treatment applied.

DR. DHREL: The Von Ruck Aqueous Extract is not a serum, but a modified tuberculin. In his own hands, he has never seen any deleterious effects from its use. He considers it a valuable immunizing agent rather than a curative one. Not one of the 50 cases treated and in whom the Aqueous Extract had been used have relapsed. Eleven out of 18 cases treated without the watery extract have relapsed, and several of these eleven have died in the past six months. Patients should not only be told to eat, but should be forced to eat.

He is certain that over nine hundred cases of tuberculosis came to St. Tammany parish annually, and he believes that at least eight hundred of these will not recover, because they will not eat and rest, and follow treatment as they are told to do. He has discontinued taking cases outside of the sanitarium, because he could not watch them sufficiently close to make certain that they would eat and rest as they should. He does not make use of the watery extract in cases that have reached beyond the fourth stage of the disease; in fact, he only makes use of it for its undoubted immunizing effects. He disagrees with Dr. Elliott, Jr., as to the length of time that a patient should rest after the febrile condition has subsided. He still urges that that time should not be less than one month.

The great error among medical men is the fact that they will take to two extremes. A few years ago, it was a question of drugging the patient and relying entirely upon the action of these medicines; now, it is the other extreme: "No medicine whatever, but rest, open-air life and nourishment." Anyone who has had any experience with consumptives will find that this latter condition is also faulty. No doubt that rest, open-air life and nourishment constitute the

chief fundamental principles in the treatment of the tubercular; but, in his experience, it is not at all sufficient.

The above three principles, followed under strict and constant supervision in a sanitarium or hospital, with the intelligent use of certain medicinal and other agents, will give us better results than if used alone. Disregarding entirely the use of these medicinal and other agents in the treatment of the tubercular, is doing an injustice to these poor unfortunates.

In answer to Dr. Patton, he begins the creosote by giving three drops in a large glass of sweetened water and administered in that way they will take large doses, up to forty drops or more, without disagreeable effects upon the stomach. He has always observed that the pulse rate increases when the patient sits up or stands up. As to the dosage and administration of the watery extract, he refers Dr. Patton to previous articles published in the *NEW ORLEANS MEDICAL AND SURGICAL JOURNAL*, 1904.

Patients may acquire the tubercular diathesis by their mode of living. He has noticed absolutely no difference in the results of the treatment of patients with a tubercular family history and those without it. It is not the climate, but the mode of living which produces the diathesis. Tubercular patients should continue the hygienic and dietetic treatment for two years after leaving the sanitarium. He had had some experience with the Russell emulsion, using it instead of the egg between the meals, but his results were disappointing, to say the least. He did not believe that the emulsion had any special value. As regards the feeding of tubercular patients, it is not the quality, but the quantity which is of the greatest importance.

DR. HALSEY, Secretary of the Committee, read the following:

Report of the Milk Committee.

It seems eminently proper that the physicians of our city, through its organized society, should show an interest in the milk supply, and examine into its condition of purity and impurity. Milk, which forms such an important proportion of our daily food, is a nutritious, economical, pleasant, and delightful food to most people; easy to prepare, and when fresh and wholesome, most easy

to digest, still, it is most difficult for the consumer to judge of its condition unless it be skimmed, or so far advanced in fermentation, that its character shows other evidences of impurity and improper composition.

Many other articles of food can be judged by external appearance; milk cannot be, and a specimen containing millions of bacteria to the cubic centimeter, or harmful adulterants, looks exactly the same as one containing but a few hundred bacteria and no adulterants. It is only by having a long, painstaking bacteriological and chemical examination made that we can be convinced of its safety, or of its containing the proper portion of constituents which go to make it the wholesome, nutritious food which it should be. The fear which exists about the average milk supply of large cities is, undoubtedly, the deterrent reason which keeps many of us from using it as a most important part of our dietary; and our interest, as physicians and prophylactic sanitarians, urges us to attempt, at any rate, to allay this fear by improving the character of the milk supply. It is our bounden duty, at least to two classes of people, who look to us for protection, to attempt something in their behalf—the *invalids* and the *infants*—to them, milk is the principal part of their dietary, and they are the least able to withstand its impurity, and their defencelessness cries out for protection. The artificiality of modern life, every day, causes mother's milk to be replaced by various substitutes; and cow's milk is the most important of all these. After asses' and goat's milk, cow's milk is the best of all substitutes, and by far, the one most in use. Yet, we see in our mortuary statistics that 33 1-3 per cent. of all deaths occur among infants, and the largest percentage of these die from affections of the gastro-intestinal tract, and as these diseases are mostly due to impure food, the natural deduction follows. It is needless to add, that there are vital statistics galore to prove this contention. The mortality of infancy has a close relationship with the purity and wholesomeness of the milk supply. A high bacterial count in the milk of small children is always dangerous, because their powers of resistance is less. If an adult can digest, without any bad effect, a bacterial count of a few hundred thousand bacteria to the cubic centimeter, even a few million, the same cannot be expected from a delicate new born baby; or, from a child who is debilitated by the awful nerve strain of dentition, or who, in his rapid body

growth, needs all the energy and the force which a healthy food and digestion can give to him. This is true, also, to a greater extent, in children suffering with cholera infantum, or weakened by some other disease. Besides these facts, many other diseases can be transmitted by the milk supply—typhoid fever, scarlatina and diphtheria, and even tuberculosis. When appointed by the society to look into this important subject, some three months ago, we realized that it was a matter of no small magnitude, and to better perform our task, we subdivided our committee into four sub-committees.

1. *Inspection or Hygienic Committee*, composed of Drs. J. T. Halsey, E. D. Fenner, M. J. Magruder, and L. G. LeBeuf.
2. *The Bacteriological Sub-Committee*, consisting of Drs. O. L. Pothier, M. Couret, and J. T. Halsey.
3. *The Chemical*, composed of Dr. A. L. Metz.
4. *Vital Statistics*, Dr. H. P. Jones.

The work was entered upon most cheerfully by all the members of the commission, and carried on with marked interest, some of it was of a painstaking and delicate nature, which entailed considerable work and time, such as the one performed by the Chemical and Bacteriological sub-committee, as will be shown by their annexed reports.

The inspection work, and the gathering of the samples early in the morning, and from railroad platform, and public markets, and the visits of some of the committee to Hammond, in Jefferson Parish, etc., took considerable time, and was not always agreeable. In conclusion, if the efforts of your committee have accomplished nothing else beyond bringing to the knowledge and attention of this society the existence of conditions of milk supply, which are damnable and criminal, it will feel amply repaid for its work, because it knows that this body will be able and willing to do much to correct this crying evil.

Report of Sub-Committee on Inspection.

This committee, consisting of Drs. LeBeuf, Magruder, Fenner, and Halsey, visited a large number of dairies in the city, and in the country, and would report that the city dairies which were visited differed, as a rule from each other, only in the extent to which all laws of dairy hygiene and sanitation were violated, but the sub-committee gladly testifies that no small proportion of these dairy-

men evinced a commendable spirit of willingness to improve the above mentioned conditions, if properly advised or directed. As examples of defects noted by the sub-committee, may be mentioned poor water, shallow wells, or wells in close proximity (10 ft.) to stables, or water closets; manure piles draining directly into wells; dirtiness of stables, no proper drainage; no provisions for cleaning the stables, milk pails, milk cans or bottles, or of hands of milkers. Further, ventilation of stables, character of food, and provision for pasturage, were in the highest degree faulty.

In no city dairy, visited by the sub-committee, is there any attempt to cool the milk, a proceeding absolutely essential, in order to lessen rapidity of bacterial growth. In only one dairy visited was there a separate milkhouse. The conditions are such as to render unavoidable a high bacterial content of the milk of these dairies; and also, a content of various other impurities, perhaps less injurious to health, but more repugnant to one's tastes. The conditions in the country dairies visited, while, as a rule far from perfect, showed a decided improvement, as compared with those in the city. Water supply much better, deep wells or Mississippi River. Abundant green food, silo plants, good pasturage. General cleanliness much better, drainage and ventilation usually good. Condition of cattle markedly superior to that of those in the city. In a considerable proportion of dairies, process of aeration and cooling was carried out, and milkhouses were used. However, the sub-committee does not intend to give the impression that these country dairies are entirely commendable; but considers, that in comparison with those in the city, the general conditions are far superior, and could state its belief, that with improved transportation facilities, a good grade of milk can be furnished therefrom. Further, the sub-committee would state, that it inspected two dairies in Hammond, which closely approximated in general, and in detail, proper cleanliness, hygiene and sanitation, and, which in the sub-committee's opinion, are capable of supplying a truly high grade and clean milk. The same conditions obtain to a lesser degree of a large dairy in Jefferson Parish.

Report of Sub-Committee on Bacteriological Examination, Drs.

O. L. Pothier, M. Couret, and J. T. Halsey.

In a large number of specimens of milk, obtained from wagons on the street, from stalls in the market, and from milk cans at the

stations on arrival in New Orleans, the number of bacteria was estimated.

In all, about 50 specimens were examined. Omitting a few, in which there are reasons to doubt the correctness of results, these specimens were found to contain from thirty-five thousand to seven million.

Of these 42 specimens, only one gave a count below 100,000; five gave a count between 100 and 200,000; six gave a count between 200 and 300,000; six gave a count between 300 and 400,000; six gave a count between 400, and 500,000; eight gave a count between 500 and 1,000,000; seven gave a count between 1 and 2,000,000; three gave a count between 6,100,000 and 7,100,000. Average of all, 970,000; average 32 (city), 680,000; average of 10 (country), 904,000.

In 32 city samples, 6 were over one million 15, 11, 61, 18, 16, 12 hundred thousand.

In 10 country samples, 4 were over 1 million 71, 13, 69, 16 hundred thousand.

RESULTS OF MILK ANALYSES.

Samples received July 16, 1906.

DR. J. T. HALSEY.

12 Samples (Nos. 1:12).

Sample Mark	Specific Gravity at 60° F.	Per Cent. Fats	Per Cent Solids Not Fat	Per Cent. Total Solids	Solids Five Grains	Preservatives	Ash	Per Cent. Added Water	Remarks
1	1.028	3.60	9.20	12.80	.640	None	.....	.....	Sediment
2	1.028	3.00	8.86	11.86	.593	"	.....	9.	"
3	1.026	5.00	8.76	13.76	.688	"	.....	.....	"
4	1.029	3.50	9.50	13.00	.650	"	.....	.....	"
5	1.027	3.00	8.78	11.78	.589	"	.....	10.	"
6	1.028	3.50	8.88	12.38	.619	"	.....	5.	"
7	1.028	4.00	9.00	13.00	.650	"	.....	.....	"
8	1.028	3.60	9.12	12.72	.636	"	.....	.....	"
9	1.028+	4.00	9.24	13.24	.662	"	.....	.....	"
10	1.029	3.50	9.40	12.90	.645	"	.....	.....	"
11	1.028	3.20	9.00	12.20	.610	"	.....	6.	"
12	1.028	3.60	9.16	12.76	.638	"	.....	.....	"

Respectfully submitted, A. L. METZ, M. D.

To the Committee on Milk Supply, Orleans Parish Medical Society.

New Orleans, Louisiana, October 13, 1906.

RESULTS OF MILK ANALYSES.

Samples received July 18, 1906.

DR. J. T. HALSEY.

17 Samples, Nos. 1:17.

Sample Mark	Specific Gravity at 60° F.	Per Cent. Fats	Per Cent. Solids Not Fat	Per Cent. Total Solids	Solids Five Grains	Preservatives	Ash	Per Cent. Added Water	Remarks
1	1.030	4.60	9.28	13.88	.694	None	.....	.....	Butter Globules
2	1.032	4.20	9.82	14.02	.701	"	0.69	.....	" "
3	1.030	4.30	9.34	13.64	.682	"	.....	.....	" "
4	1.031	4.00	9.68	13.68	.684	"	.....	.....	" "
5	1.029	4.00	9.30	13.30	.665	"	.....	.....	" "
6	1.030	3.60	9.70	13.32	.666	"	.....	.....	" "
7	1.030	5.60	9.68	15.28	.764	"	0.70	.....	" "
8	1.028+	4.00	9.06	13.06	.653	"	.....	.....	" "
9	1.028	5.00	9.10	14.10	.704	"	0.70	.....	" "
10	1.027	4.20	8.80	13.04	.652	"	.....	.....	" "
11	1.029	4.10	9.44	13.54	.677	"	.....	.....	" "
12	1.029	3.60	9.50	13.10	.655	"	.....	.....	" "
13	1.029-	4.00	9.12	13.12	.656	"	.....	.....	" "
14	1.032	4.60	10.20	14.80	.740	"	0.70	.....	" "
15	1.027	6.40	9.06	15.46	.773	"	0.69	.....	" "
16	1.029	4.00	9.36	13.36	.668	"	.....	.....	" "
17	1.027	5.20	8.74	13.94	.697	"	0.67	.....	" "

Respectfully submitted,

A. L. METZ, M. D.

To the Committee on Milk Supply, Orleans Parish Medical Society.

New Orleans, Louisiana, October 13, 1906.

RESULTS OF MILK ANALYSES.

Samples received July 2 (1:40 p. m.), 1906.

DR. J. T. HALSEY.

2 Samples, marked respectively Dr. LeBeuf.

Sample Mark	Specific Gravity at 60° F.	Per Cent. Fats	Per Cent. Solids Not Fats	Per Cent. Total Solids	Solids Five Grains	Preservatives	Ash	Per Cent. Added Water	Remarks
Dr. LeBeuf	1.028+	3.50	8.66	12.16	.608	None	.....	6.5	.....
"	1.028	3.45	8.71	12.16	.608	"	.....	6.5	.....

RESULTS OF MILK ANALYSES.

Samples received July 6, 1906.

DR. J. T. HALSEY.

5 Samples.

Sample Mark	Specific Gravity at 60° F.	Per Cent. Fats	Per Cent. Solids Not Fat	Per Cent. Total Solids	Solids Five Grains	Preservatives	Ash	Per Cent. Added Water	Remarks
3	1.033	2.60	10.40	13.00	.650	None	.....	.....	Either
4	1.030	4.00	9.74	13.74	.637	"	.....	.....	skimmed or
5	1.029	3.80	9.18	12.98	.649	"	.....	.....	1st milking.
Dr. O. L. Pothier	1.027-	8.00	10.54	18.54	.927	"	0.69	.....	.....
Dr. Metz, from residence	1.030	4.10	9.44	13.54	.677	"	0.70	.....	.....

Respectfully submitted,

A. L. METZ, M. D.

To the Committee on Milk Supply, Orleans Parish Medical Society.

New Orleans, Louisiana, October 13, 1906.

In conclusion we wish to strongly commend the determination shown, by the City Board of Health, to enforce Ordinance 16204, C. S., regulating the proper sanitary measures governing all dairies, and controlling the milk supply of the city, and trust that the Council will be able to furnish the money necessary to enforce it.

On account of the difficulty of obtaining proper pasturage, pure water, and sufficient place to run Sanitary and Hygienic Dairies, we beg to recommend the prompt enforcement of Ordinance 1335, C. S., on March 6, 1907, which is the limit of time of the removal of city dairies, outside of the city limits.

FINAL REPORT OF MILK COMMITTEE.

Since the last meeting representatives of the committee conferred with Dr. O'Reilly and various members of his staff. At this conference they learned from him of the work already done and that contemplated by him, with the object of improving the milk supply of this community. The result of the acquisition of this knowledge was to persuade the committee that it would be best not to advise this society to take any independent action in connection

with milk, but to recommend to the society and individual members to collectively and individually support and aid the Board of Health in the campaign already started, and especially that the society support Dr. O'Reilly in his request to the City Council for the extra funds which are necessary to enable the Board of Health to enforce City Ordinance 16204, C. S.

LOUIS G. LEBEUF, *Chairman.*

J. T. HALSEY, *Secretary.*

Communications.

Contagion and Infection.

To the Editors of the New Orleans Medical and Surgical Journal

In the article entitled "Confusion Between the Terms 'Contagion' and 'Infection,'" or the Mosquito Craze, by C. Faget, M. D., of this city, I have been quoted as reporting certain cases of yellow fever on the Bayou Lafourche, La., last summer as initial focus of infection. I wish to give the facts thoroughly in these cases and let those who are non-believers in the mosquito doctrine answer.

About the beginning of June, 1905, one of the fishermen, named Camille Rabstock, of Leeville, arrived in New Orleans and landed near the French Market with his lugger. While his boat was tied up alongside the wharf he heard rumors about there being yellow fever in city, and after making inquiries regarding a certain vessel which lay at anchor, was informed that there was a case of yellow fever on board. After a few days stay in New Orleans he returned to Leeville.

This person, Rabstock, was an immune by reason of his having had yellow fever in 1878. About ten days after his return to Leeville members of his household were stricken down with fever which, in my opinion, was yellow fever, for all the other members of his family (and his is the largest family in Leeville) had the fever subsequently, and I had occasion to treat several of them. He, as well as those of the family who had had yellow fever in 1878 failed to get the prevailing fever, as it was popularly termed at the time. From there the disease seemed to have spread in all directions. It will be well to mention that this individual is extremely

popular with the inhabitants of Leeville. He owns a store which is situated on the right bank of the Bayou. About eight feet away from this store is his residence. About fifteen feet in front of his store is a large shed or warehouse for seines and other fishing material. This warehouse is about 25 feet from the water front where his lugger generally ties up. It is an easy matter for those who are firm believers in the mosquito doctrine or dogma to see how possible it is for a lugger to carry infected *stegomyia* mosquitoes from one place to another. In the backyard of his store and in the yard of his residence were several barrels and cisterns containing fresh water, breeding places for the yellow fever mosquito.

About July 2 one Clavis Terrebonne, white male, aged about 21, left Leeville for New Orleans to sell his fish and shrimp. He reached New Orleans about the 3d of July, remained there up to about the 5th, when he returned to Leeville. While in New Orleans he visited a boarding and lodging place near the Cathedral. He was in the habit of paying attention to a young lady in this house. At the time of his visit at this house some one was laid up with fever, presumably yellow fever. He left New Orleans on or about the 5th and arrived at Leeville on the 6th. On the night of the 9th he visited a moving picture (floating) show exhibition. This night was unusually warm. After the show he complained of being ill. He died without medical attention seven days later. His relatives stated that he vomited black, that he had not urinated for over twenty-four hours before death, and that his body was yellow.

In answer to the reference to the cases on board the U. S. S. *Plymouth* I wish to mention this, that while I was in attendance at the Pan-American Medical Congress in Havana Cuba, in 1900, I happened to be Secretary of the Section of Maritime Hygiene and Quarantine, and after the reading of Surgeon Walter Reed's paper of the experiments of the yellow fever commission at Quemados, Cuba, I asked the question of the presiding medical officer, Dr. Juan Guiteras, regarding the history of yellow fever on the U. S. S. *Plymouth*, and to kindly explain the connection of the cases on board the *Plymouth* with mosquitoes. Dr. Guiteras answered me by stating that when the *Plymouth* went North and was placed out of commission a small temporary room was built on the ship for the watchmen to live in. In this room was a small stove to heat it. When the

Plymouth was next placed in commission this temporary room was demolished and a large number of flies were seen to make their exit from this room; and if flies lived in this room, mosquitoes could live there. No one present at that congress made any further remarks, and I believe that it was the opinion of every one present that infected *stegomyia* mosquitoes had remained on the *Plymouth* all the time, from the day she went out of commission to the time she was placed back in commission.

Very respectfully,

(Signed)

R. O. MARCOUR, M. D.

Concerning Life Insurance Examiners.

New Orleans Medical and Surgical Journal, New Orleans, La.:

Gentlemen—I dearsay the “Terminal Filaments” would be grateful for any light you might throw upon the question of Insurance Examination Fees. As matters now stand the American Medical Association has not gone on record for any solution of the question; our State Medical Association winked the other eye when the matter was tentatively approached at its last meeting, although some State Societies have met the issue squarely. The Parish Societies of St. James, Ascension and Assumption, and others throughout our State have declared for a flat fee of \$5.00 for every insurance examination. The business now being done by life insurance companies is not calculated to keep any one very busy, still, what little work there is, has to be done by someone, and out here on the firing line we would like to know “where we are at.” I enclose the cause of this communication, which is doubtless being sent throughout the State. Yours truly,

(Signed)

B. A. COLOMB.

New Orleans, August 24, 1906.

DR. B. A. COLOMB, *Union, La.:*

Dear Doctor—Our Company proposes working in your town at an early date, and as a preparatory measure we are selecting our Medical Examiners. Our fees are as follows:

Industrial, per examination	\$0.35
Intermediate, per examination	1.00
Ordinary \$500 to \$3,000.....	3.00
Ordinary \$3,000 to \$5,000.....	4.00

We would like very much to have you as one of our examiners, so if you will kindly fill out the enclosed blank, we will assure you of this appointment. Return as soon as possible. We will be glad to furnish further information if required. Yours truly, (Signed) JNO. T. CREBBIN,

N. O. Medical and Surgical Journal

Editorial Department.

CHAS. CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

Greater Tulane.

Considerable attention was attracted to our local university by the recent visit of a large and representative group of college presidents from all parts of the United States. Aside from the direct entertainment given them by the Faculty and Alumni of Tulane, their visit should mean a great deal to the community in the honest exploitation of the University itself.

The President of Tulane is aggressive, honest and fearless in his purposes and motives, and with these Tulane should certainly prosper, but, on the other hand, comparatively little has been done to bring Tulane to the notice of educators elsewhere; only the individual merit of the school itself has been depended upon to this end.

On every hand the expression of the visitors was complimentary to our local institution, and even if the good work may not result in increased attendance, it will go far to establishing the reputation of Tulane and its methods.

On this point it might be timely to refer to the rearrangement of the Medical Department of Tulane and its influence upon medical education in the South. For many years the Medical Department of Tulane has occupied an honorable position among medical colleges, and in spite of the fact that its standard has been slow to rise. The actual work accomplished in its teaching has resulted in the distribution of a host of graduates who have altogether made a record creditable to their Alma Mater. A recent review of

the records of State Medical Examining Boards showed Tulane among the first nine of the first dozen medical schools in this country, so far as the standing of their graduates were concerned, when it came to the test of State examination. The local profession as well bespeak the past work of Tulane, and whatever of medical institution, progressive advance, whether in hospital, sanitary efforts or in the upbuilding of the profession itself, Tulane has the right to take the credit.

In the rearrangement of the Tulane medical faculty and the establishment of a post-graduate department made up of the faculty of the New Orleans Polyclinic, now trained in this sort of teaching for the past eighteen years, a step forward has been taken which is original and perhaps unique among the medical colleges of this country. It means not only that the youth in search of a medical degree is, as heretofore, able to obtain the best in clinical as well as didactic work, but that the medical man of the South will be afforded the opportunity of the highest class of advanced instruction under the best possible opportunities to be had at the leading university of the South.

We prophesy for Tulane University a great future, and, if its history is to be written, one great epoch of its making will be recorded under the forceful administration of Dr. E. B. Craighead whose foresight is responsible for much of the present movement.

A National Department of Health.

For several years there has been more or less agitation in favor of the establishment of a National Department of Health under a Secretary, who shall be a member of the Cabinet. The subject received marked attention at the last meeting of the American Association for the Advancement of Science, and the American Medical Association long ago placed itself on record as endorsing the creation of such a department.

To the medical profession the need for the proper supervision of health matters for the benefit of the whole people is patent. No argument is needed to convince them of its importance for the

greater welfare of this people and the greater prosperity of the nation. Yet, some of the facts and figures brought out by Prof. J. Pease Norton, of Yale, in a paper read before the American Association for the Advancement of Science are noteworthy, and we wish we had the space to give many of them. He shows that the total expenditure for all the bureaus directly or indirectly dealing with the health of the people is of about \$7,000,000 out of a total national expenditure of about \$725,000,000 notwithstanding the fact that he includes those as indirectly concerned as the bureau of labor and that of immigration. In a similar way the Government has spent annually over five millions of dollars in a fight against the diseases of plants and animals. Prof. Norton also gives figures to show how much in money alone would be saved to this country by the diminution of illness and the increase of age at death, as well as the lessening of the economic burden of sickness. The total is so enormous as to be perfectly astounding, although the calculation by means of which it is reached seems conservative. It is something over three trillions of dollars per annum. It is well to bring this out forcibly as there is no doubt that the argument to the pocket is the most powerful today, although it is nothing when compared with the suffering and misery that would be prevented by a diminution of preventable diseases.

Whether it is wise to insist on a Cabinet position for the chief health officer is debatable, and we believe success would be more within reach if we were less exacting, but it is the duty of the medical profession to urge the establishment of a department of health and assist in disseminating the facts demonstrating its necessity.

Registration of Births and Deaths.

Louisiana is still among the non-registration States in the list of the Bureau of the Census, although New Orleans and some other cities have an efficient system of record. This year California, Colorado, Maryland, Pennsylvania and South Dakota were added to the list. While this State is still with the majority in not possessing a general method of registration for vital statistics, we hope that our law-makers may soon be made to understand the

importance of joining the progressive list through the efforts of our State Board of Health and medical bodies in general.

Abstracts, Extracts and Miscellany.

Department of Surgery.

In Charge of DR. F. W. PARHAM, Assisted by DR. F. LARUE, New Orleans.

EXTERNAL ESOPHAGOTOMY FOR FOREIGN BODY.—Mr. Richelot, in *"La Tribune Medicale"* (May 22, 1906), relates the case of a man aet. 65 years, a farmer by occupation, who swallowed his set of false teeth.

Extraction from above with various instruments had in vain been attempted. On the third day Mr. Richelot, after a preliminary gastrostomy, was easily able to remove the plate by performing an external section of the esophagus, followed by drainage.

Pulmonary congestion, which had already set in before the latter intervention, caused the patient's death four days after.

Mr. Sebileau, discussing the case, expressed himself in favor of immediate external esophagotomy in case of such a foreign body as a set of false teeth, which have irregular and cutting borders.

He discards altogether the preliminary operation on the stomach.

Mr. Pozzi agreed with Sebileau as to the risks incurred in the attempts at removing such a foreign body from the esophagus, and laid stress on the advisability of early external section of that tube, after first determining the exact location of the swallowed object.

CYST OF THE NECK—In *"La Tribune Medicale"* (May 22, 1906), it is stated that Mr. Walther presented to the Societe de Chirurgie a voluminous tumor which he extirpated from a male patient aet. 68 years. The growth, occupying the side of the neck and of six years' duration, seemed to divide the larynx and thyroid cartilage.

The patient, at the time of the operation, was cachectic and diabetic. After injecting stovaine, Walther incised the cyst, evac-

uating nearly a quart of bloody fluid; chloroform was then administered in order to facilitate the removal of the sac, which had no pedicle and which proved on examination to be an angioma.

DIAGNOSIS OF CANCER OF THE LESSER CURVATURE OF THE STOMACH—In "*La Tribune Medicale*" (August 11, 1906), Ziegler is reported as saying that this form of gastric cancer is oftentimes latent, or so considered, from the fact that no appreciable tumor is felt, nor is the stomach markedly distended.

Ziegler thinks that a diagnosis can be reached in the following manner: Gastric lavage, after fasting, reveals no residual liquid; but some mucus is usually found adherent to the lower end of the tube.

Microscopically alimentary debris can be detected; furthermore there is nearly always found quite a number of lactic acid bacilli (*Bacillus of Oppler*).

If the tube is inserted two and one-half hours after a normal or test meal, nothing is seen on microscopic examination.

The author believes that the presence of the above named bacilli should help one in the diagnosis of latent cancer of the stomach, especially in differentiating a simple ulcer from one undergoing malignant changes.

Department of Obstetrics and Gynecology.

In Charge of DR. P. MICHINARD and DR. C. J. MILLER, New Orleans.

PULMONARY COMPLICATIONS FOLLOWING ABDOMINAL OPERATIONS—Drs. Hunter Robb and Howard Dittrich (*Surg. Gynec. and Obstetrics*) reach the following conclusions after carefully studying 1007 abdominal operations:

Pulmonary complications after abdominal operations may originate in several ways.

1. Generally from an infection originating from the field of operation.

2. From the effects of the anesthetic; a, from the administra-

tion of too great a quantity of the drug, exhibited over too long a time; b, from the inspiration of vomited or infection material—inspiration pneumonia; c, from injurious substances contained in an adulterated anesthetic.

3. Exposure either during or after the operation, to sudden or excessive changes of temperature.

4. In 1007 abdominal operations 35, or 3.5 per cent. of his patients developed pulmonary complications.

5. Older patients do not show more susceptibility to lung complications than the younger ones.

6. Only 4 of the 35 patients showed physical signs of lung involvement before operation.

7. In 3 cases acute pulmonary tuberculosis was evident immediately after operation.

8. Out of the 35 patients 5, or 14 per cent., died. In one case a broncho-pneumonia, in a second a general peritonitis, and in a third an acute cardiac dilatation were the immediate causes. In the other cases metastatic nodules from malignant growths in the pelvis were found in the lungs.

SHORTENING OF THE ROUND LIGAMENTS—Dr. J. M. Baldy (*N. Y. Med. Jour.*) states that he has concluded that other surgical procedures than intraperitoneal shortening of the round ligaments are inadequate for backbone displacements of the uterus. The broad ligaments are perforated from their posterior by forceps, which on emerging on the anterior surface are made to grasp the round ligaments, which are then drawn through to the posterior surface with the forceps. The round ligaments are brought together, and saturated both together and to the uterus low down on its posterior surface, at about the position of the internal os. This accomplishes 3 things: 1, The tilting forward of the uterus to a normal anterior position; 2, the lifting of the whole pelvic floor from its sagging position; 3, the uplifting and support of the ovaries and tubes. The 3 results are of necessity a part of each other, and one is as constant as the other. The most important of all, the uplifting and support of the ovaries, is absolute and sure; and this result is accomplished without the slightest pressure of these delicate organs.

The author claims for the intraperitoneal shortening that it gives a fairly sure substitute for the lost elements of support and does absolutely no harm. It allows of pregnancy with a course as natural as if no operation had been performed, and there is no danger to anticipate at its termination.

Department of General Medicine.

In Charge of DR. E. M. DUPAQUIER, New Orleans.

CONCERNING THE MANNER OF INFECTION WITH ANCHYLOSTOMA DUODENALE.—LOOSS (*Zeitschrift für Klin. Med.* Band. 58, Heft 1) has brought forth a very valuable contribution to this subject, emphasizing above all the prominent part played by the skin as a means of entrance for the infection. The casual relationship between so-called ground-itch and hook-worm disease has long been recognized in this country, but it has remained for Looss to place this connection upon a more solid and scientific basis by tracing the route of the infection step by step from the skin to the intestinal tract. In his experiments he made use principally of young dogs, who seem to lend themselves best for the purpose. The skin of the dog's leg or abdomen is first shaved and a drop of water containing large numbers of the live, anchylostoma larvæ is brought into direct contact with it. Already within a few minutes the point of contact begins to show unmistakable signs of irritation, becoming red, itchy, and finally swollen. Examination at this time shows that the larvæ are penetrating the skin, boring their way now gradually through its various layers, reaching the smaller veins in the subcutaneous tissue, then the larger, and finally carried by the blood stream to the vena azygos, from which they are swept into the right ventricle of the heart.

This whole process, and that following, the author was able to trace definitely with the microscope, using sections from many dogs for the purpose. From the right heart the larvæ are pumped into the capillaries of the lung alveoli, which they actively penetrate, thereby gaining admission into the open respiratory tract. They now gradually creep their way from the lung into the larynx, from which the further step to the esophagus, the stomach and the intestinal canal can be easily followed and understood.

This is the common and usual route of invasion, but it was also observed at times that the larva had traveled along the lymph spaces and occasionally even through the lymph glands, eventually reaching the right heart through the thoracic ducts. There seems to be in the lymph glands, however, a well marked evidence of resistance to the passage of the larva, suggesting the same protection against invasion as is assumed by these glands in an infection with micro-organisms. The entire time thus consumed in the passage from the skin to the intestinal canal, in the case of very young dogs, was found to average about twelve days, the age of the animal acting as an important factor in this connection.

Though these experiments were performed necessarily upon lower animals, where each step could be controlled and traced accurately, the same method and manner of infection, though slower, was found in the case of the human subject.

The author cites himself, first of all, as an instance, having infected himself in Egypt accidentally on two separate occasions while manipulating the larva in his laboratory. Mouth infection could be excluded positively in both instances. Again, one of the nurses in the hospital in Cairo, entirely free of uncinaria, volunteered himself for experiment. The larvæ were placed in contact with his skin, exactly as in the case of the dogs, and seventy-one days later ancylostoma eggs were found in his stools. The passage of the larva here could not be followed, of course, but the final, conclusive result makes the inference clear. However, in one case, the passage of the larva through the human tissues was observed, if only in part. A hospital patient was to undergo amputation of the leg. One hour before the operation the larvæ were placed in contact with the skin of the doomed leg and upon examination after removal, it was found that the larvæ had already bored their way through the subcutaneous, areolar tissue.

There can no longer be any question, therefore, of the important role the skin plays as an avenue of entrance for the hook-worm, a fact which has long been suggested empirically by the intimate connection of the disease with ground-itch. Further than this, Looss has strong grounds for the belief that this method of infection is by far the most frequent and widespread. The possibility of infection through the mouth, through unclean, contaminated food or hands, can by no means be denied, but the author believes,

and has strong reasons for his belief, that such contamination, contrary to our former ideas, plays but a subordinate part in the general spread and propagation of the disease. It follows then, that our prophylactic measures should be directed chiefly to the prevention of the contact of the naked skin with the infected soil. Primarily, of course, contamination of the soil should be avoided.

The author does not subscribe to the general belief that the adult worm is a blood sucker in the accepted sense. He believes that nearly all of the symptoms, including the anemia, can be explained by the toxemia, which the presence of the worm in the intestine undoubtedly sets up.

In his experiment with dogs he frequently noticed a few hours after the larvæ were allowed to penetrate the skin, undoubted symptoms of an acute toxemia, fever, a watery diarrhoea, etc.

It is this slow poisoning of the blood, and not the loss of blood direct, which can explain the severe hemolysis, the anemia, the eosinophilia and the numerous train of other symptoms which characterize the disease.

Department of Therapeutics and Pharmacology.

In Charge of DR. J. A. STORCK and DR. J. T. HALSEY, New Orleans.

THE EFFECTS OF WATER TREATED WITH COPPER ON MAN.—Kraemer in the *American Journal of Pharmacy* for March, 1906 (*The Therapeutic Gazette*, July 15, 1906), tells us that while it has been conclusively shown that exceedingly minute quantities of copper are toxic to typhoid organism, still the question is raised by some as to the toxic effects on man when copper or its salts are used in the purification of drinking water. Kraemer says:

“For nearly a year all of the drinking water consumed in his home has been treated with copper. A strip of copper foil, or sheet copper, 9 inches square, is placed in a vessel containing from three to four quarts of water and allowed to remain from four to eight hours. The foil is first cleaned with powdered pumice, and retains its luster for weeks unless the water contains a considerable quantity of sediment, and provided the quantity of water is renewed

immediately each time upon drawing off the sterilized or purified water. On account of the varying amount of sediment, it has been found desirable to filter the water before treating it with copper foil. Up to this time no ill effects have been noted from drinking the water so treated, and in fact the general health of his family may perhaps be said to be better than usual, in that they have not had to consult a physician during this time. Another interesting observation is that the water being more palatable than boiled water, they consume larger quantities, which possibly has some influence on the general bodily condition.

"There being a number of factors which tend to eliminate the copper in solution, it is hardly likely that there would be any copper in solution by the time the water from a reservoir reached the consumer if the treatment of the reservoir were in competent hands. Many plants contain relatively large quantities of copper, and when these are used as food some of the copper is taken up by the animal organism, but there are no records of any ill effects from copper so consumed."

J. A. S.

THE EFFICIENCY OF COPPER FOIL IN DESTROYING CERTAIN BACTERIA IN WATER.—After a short notice of the work of Kraemer, Moore and Kellerman, and also of the admirable work of Pennington, Gildersleeve and Stewart, in *American Medicine*, July, 1906, Buhlig writes as follows of his own work:

"In my work the action of copper foil upon the typhoid, colon and dysentery bacilli in water was studied. The copper salts were not used. Flasks containing 250 cc. of water of different character were inoculated from 24 hour bouillon cultures of these organisms. The water was previously sterilized in the autoclave, or in some cases bacteria free water was obtained by filtration through a Pasteur filter, and proved so by plating out. Sheets of dry, bright copper, sterilized in the autoclave and approximately 4 cm. square, were used for each 250 cc. of water, and each experiment was accompanied by controls. The water was plated out on plain agar at the beginning of experiments and approximately after 4 hours, 8 hours, 24 hours, 2 days, and 7 days, except in some of the last trials when no further plating was done after 8 hours. In one series, flasks were kept at incubator temperature and in another at room temperature. Bacteria were counted after six days' incubation. Stock laboratory cultures were used.

"In no case was any copper reaction obtained from the water by testing with potassium ferrocyanid or with ammonia water, whether in flasks with bacteria or in extra controls with no bacteria. This is a significant fact in relation to the discussion of the possible toxicity of water so treated, a fact which Gildersleeve commented upon and concluded not to be a danger.

Tables of some results are given. Typhoid and colon bacilli were used, and the flasks were kept at incubator temperature. Each table as given represents one of several trials with similar results.

In no case was there a total destruction of the colon bacilli by this method, except when using distilled water, and even the controls here show a great reduction. In every case, however, the colon bacilli when acted upon by the copper were far fewer than in the controls. The action upon typhoid, on the other hand, is most striking, all of them, except in one instance, being destroyed in 8-9 hours. Water that had been filtered through a Berkefeld hydrant filter and sterilized subsequently in the autoclave, gave results similar to those from distilled water, the bacteria from the controls growing much fewer to total absence.

A series of flasks were inoculated in a similar way to the one above, but were kept at room temperature instead of that at the incubator to approximate more closely the conditions that would obtain if a householder were to use the method for purifying water. The results obtained here coincide somewhat with Gildersleeve's.

The deduction from this series is that while typhoid bacilli disappear rather rapidly and completely when flasks are kept at incubator temperature, they are not so sure to die at room temperature unless the water is distilled. Therefore this method of destroying typhoid bacilli cannot be used by the householder with any degree of safety. It has been shown, however, that if copper vessels are used instead of flasks with immersed copper the method is safe.

In a last series flasks were kept both at incubator and at room temperature, and some of the flasks were inoculated with bacillus dysenteriae (Flexner), sterilized lake water being used.

In this experiment we have the same general conclusions as before. The surprising thing is the ease with which the dysen-

tery bacillus disappears. This latter result is not quite in accordance with other workers, for instance Gildersleeve's.

J. A. S.

Department of Ear, Nose and Throat.

In Charge of A. W. deRoaldes, M. D., and Gordon King, M. D.
New Orleans.

TREATMENT OF NASAL SUPPURATION IN CHILDREN BY ASPIRATION—In the *Munchener Med. Woch.* of July 25, 1905, Sondermann describes his method of treating purulent rhinitis in children as follows: An air-tight mask to which is attached an aspirator is fitted over the patient's nose, and while the patient is in the act of swallowing or phonating the aspirator is operated vigorously. In the case of very young children the aspiration may be done while the child cries, the operation of the aspirator being the reverse of what is done with the Politzer bag. The secretions are thus drawn out and caught on pad of cotton placed in the mask. This is repeated four or five times a day to keep the nose free of secretion, and the author claims that the method is much more effective in bringing about a rapid termination of the disease than are the methods usually employed.

TINNITUS AURIUM AND "DECHLORISATION"—Lermoyez comes to the front again with another article in favor of the "dechlorisation" treatment, this time for that very obstinate and distressing symptom, tinnitus aurium.

Jaquet has written of the happy results obtained in the treatment of chronic hypertrophic rhinitis by excluding salt from the diet. Chauveau describes the cure of certain forms of pharyngitis by excluding salt from the diet or increasing it. Certain it is that the mucous glands are largely influenced in their action by the proportion of sodium chloride in the blood. Dry conditions of the mucous membrane indicate a paucity of salt in the blood and congestion and hypersecretion an excess.

An excess of salt also predisposes to muscular spasms. Lermoyez relates a case of tinnitus aurium due to muscular spasm quickly relieved by exclusion of salt from the diet.

The writer has made some interesting observations along these

lines and is convinced that a most interesting field of investigation has been opened up by these enterprising clinicians.—*La Presse Oto-Laryngologique Belge*.

ATROPHIC RHINITIS AND RADIO-THERAPY.—Dionisio, of Turin, who has been pursuing long and careful study of the effect of radium in the treatment of ozena, has arrived at the conclusion that curative results may be obtained by prolonged effort. In a number of cases exhibited by him at the Royal Academy of Medicine of Turin, some had reached an advanced stage of atrophy before the radium treatment was begun, and still had been completely relieved by the applications. Unfortunately a great deal of time and patience is required to effect a cure. From 100 to 600 exposures of an hour each were required, in consequence of which many patients had not the perseverance to complete the treatment. In more than fifty cases the author found only three that failed to respond to the treatment, and if his deductions are correct a cure has been found for one of the most repulsive and intractable diseases of the nose. In the past so many new treatments have been thus extolled by authors whose better judgment was carried away by misplaced enthusiasm, that we are very loth to accept these so-called curative methods for their first appraised value, and prefer to await the true test of experience.—*Revue Hebdom. de Laryngol*, Sept. 15, 1906.

Louisiana State Medical Society Notes.

In Charge of DR. P. L. THIBAUT, Secretary, 141 Elk Place.

NEXT MEETING: NEW ORLEANS, MAY 14, 15, 16, 1907.

OFFICERS—President, Dr. Henry Dickson Bruns, New Orleans; First Vice-President, Dr. Charles McVea, Baton Rouge; Second Vice-President, Dr. George F. Wilson, Bienville; Third Vice-President, Dr. A. J. Perkins, Lake Charles; Secretary, Dr. P. L. Thibaut, New Orleans; Treasurer, Dr. Jules Lazard, 830 Canal Street, New Orleans.

COUNCILLORS—Chairman, Dr. E. J. Graner, 2d Cong. Dist., New Orleans; Secretary, Dr. J. L. Scales, 4th Cong. Dist., Alden Bridge, La.; Dr. P. E. Archinard, 1st Cong. Dist., New Orleans; Dr. J. Wofford Sanders, 3d Cong. Dist., New Iberia, La.; Dr. S. L. White, 5th Cong. Dist., Ruston, La.; Dr. C. M. Sitman, 6th Cong. Dist., Greensbury La.; Dr. C. A. Gardiner, 7th Cong. Dist., Sunset, La.

MINUTES OF 1906 SESSION.

(Continued from November Number.)

DR. DUREL introduced the following resolutions:

Resolved, That we recognize tuberculosis as a contagious and

infectious disease and ask and demand of our State and City Health Boards officers to take such steps as may be necessary looking to proper measures to be adopted in checking this disease.

Adopted.

DR. A. F. BARROW, President of the State Board of Medical Examiners, read the following report:

New Orleans, May 8, 1906.

Mr. President and Gentlemen of the Society: As President of your State Board of Medical Examiners, I ask your attention for a few moments while I make a report of our operations since the last meeting of the Society. I am glad to be able to report more results than when I last met you, and while money has been very scarce, with nothing in the treasury, we have instituted and carried to successful termination quite a number of prosecutions, and I believe that in every case where the local fraternity has secured evidence and attorney and court cost, the prosecution has been promptly instituted, and no failure to gain the desired end has been yet reported to me. This certainly clearly demonstrates the necessity for amending the law so as to secure the services of the State's Attorney, and because of the lessening of expenses making it possible to institute proceedings against every violator of our law in this State. These matters of the needs of more effective law will be discussed under the head of the New Law.

The usual examinations have been held with nothing special to report about them except that the general campaign for higher medical education is clearly showing cheering results in the quality of papers now being handed in at our examinations, and the class which was examined only a few days ago has especially shown the careful teachings of the colleges, together with a decided indication that their matriculating qualifications have been raised and are being carefully and fully observed.

Before closing my remarks, I wish to emphasize a fact which must be fully apparent to all. The efficiency of the Board in its campaign against the violators of the law will, even under the proposed new law, depend largely upon the co-operative efforts of the entire members of the profession. I feel sure, however, that with a new and emphatic law, and with the profession

organized throughout the State, this soil will soon prove unfitted and the atmosphere unfavorable for the growth and prospering of quack and charlatan who now so universally infest every quarter of our State.

The vacancy which occurs on the Board this year is caused by the expiration of the term of Dr. F. M. Thornhill, and I wish to express to this body our appreciation of the good work done by him during his membership on the Board, and the most we can pray for is that in the selection of his successor we will secure one who will exactly fill his place.

In making this report I wish to say that I at last feel encouraged and firmly believe that the clouds are breaking and the profession will soon be accorded that relief which it has so long and vigorously prayed for.

(Signed) A F. BARROW, M. D., President.

DR. CHASSAIGNAC: I think the gentlemen ought to give us some of the details. They speak of prosecutions, and we would like to know how many there were and how successful they were.

DR. LARUE: We had only two successful prosecutions, Dr. P. K. Schnell and Dr. C. W. Bick, and we got injunctions against both of them. I have notified several to quit practicing medicine. I have tried to keep in touch with secretaries of the parish societies. Whenever any of you gentlemen know of anybody illegally practicing medicine, I wish you would notify the secretary of your society and he will notify the secretary of the State Board.

DR. GELBKE: How is it that J. C. Fowler still continues to practice?

DR. LARUE: This is the first information that I have had that he is practicing medicine.

DR. GRANER: You are familiar with the Medical Act which we have prepared and this will be submitted at the first part of the session of the Legislature next week, but there will be some modifications of the printed act that you have received. This is on the advice of attorneys. There is nothing more that I wish to say except that one year ago I tried to impress upon you the necessity of helping us out and am much gratified at the response.

In connection with this act, which we are trying to have passed, I want to call attention to the fact that it is necessary for us to do

a little electioneering. If you are registered voters, the politicians will respect you.

The report of the Committee on Public Policy and Legislation was called for, but no report was presented.

PROCEEDINGS OF PARISH SOCIETIES.

THE AVOYELLES PARISH MEDICAL SOCIETY met at its regular meeting (quarterly) in the High School Building at Moreauville, October 4, 1906, at 10 a. m. Dr. W. F. Couvillon, President of the Society, in the chair. Dr. E. Stanley Matthews being absent, Dr. S. J. Couvillon was made secretary of the meeting. There were present W. F. Couvillon, Emeric de Nux, L. C. Tarleton, Emil Regard, T. A. Roy, G. L. Drouin, C. J. Ducate, W. A. Quirk, Elliott Kiblinger, S. J. Couvillon, R. G. Ducate, S. D. Porter, G. R. Fox, W. G. Branch and T. L. Lougarre.

CLINICAL CASES AND DISCUSSIONS—DR. TARLETON reported a case of *epilepsy following a long continued case of enteric fever*, discussed by Drs. C. J. Ducote, Kiblinger, W. F. Couvillon, S. D. Porter and Fox.

DR. FOX reported a case of "*Hystero Epilepsy*" caused from ovarian derangement with result double salpingo oophorectomy as the resort for radical cure, discussed by Drs. C. J. Ducote, Porter and R. G. Ducote.

DR. KIBLINGER reported a case of *multilocular ovarian cyst*; a laparotomy as the only procedure in the treatment revealed a very large tumor, which after tapping expelled in the neighborhood of 15 gallons of a beer-like fluid. Part of the sac only was extirpated owing to extensive adhesions, with exceptionally good results. Discussed by Dr. S. J. Couvillon.

Recess 10 minutes.

SCIENTIFIC PAPERS AND DISCUSSIONS.

DR. EMERIC DE NUX read a paper on *Intestinal Parasites in General*, which received much applause. Discussion was opened by Dr. L. C. Tarleton, followed by every member present. Macroscopic and microscopic demonstration of the "*Uncinariasis Americana*" were made which proved interesting. Thymol in 2

doses of 30 grains each followed and preceded by thorough cleansing of the intestinal tract, with a total abstinence from food, seemed to have been the most adapted treatment in the different forms of intestinal parasites discussed.

At 12:30 P. M. the Society repaired to the hospitable home of Dr. and Mrs. George Randolph Fox for the usual banquet, which was a sumptuous repast, as expressed by many of the members present.

THE AFTERNOON SESSION was spent in terminating the unfinished discussions, and with a clinical case reported by Dr. Porter, treated previously by him, Drs. Fox and R. G. Ducote, and diagnosed as pulmonary tuberculosis, which diagnosis was rejected by an expert and quite recently confirmed as being genuine by a radiograph (X-Ray examination) at Colorado Springs, Colo., where where the patient is now undergoing climate treatment.

It was moved and seconded by Dr. Regard, that a committee of 3, composed of Drs. W. F. Couvillon, Emeric de Nux and S. C. Tarleton be appointed to confer with the parish Board of School Directors for their co-operation in adopting a series of lectures to be delivered by the members of the Avoyelles Parish Medical Society, in the different school districts of the parish; that the President of the Society select the place and time of meeting, and select the subject of the lecturer for the occasion; and that every school in the locality assigned be invited and the public generally as well, to try and be present at each occasion.

Place of next meeting: First Thursday in January, 1907, at Cottonport.

Subject for discussion: Prevention of tuberculosis in general.

CATAHOULA PARISH MEDICAL SOCIETY—At a meeting November 3, on motion of Dr. Burley, the following resolution was adopted:

Whereas, we, the members of the Catahoula Parish Medical Society, believing that life insurance examinations require a great amount of time and skill, and that the compensation does not allow of such;

Resolved, "That on and after December 1, 1906, that we, the undersigned members of the Catahoula Parish Medical Society do hereby agree that we will not examine applicants for insurance in

the 'old line companies' for less than five dollars (\$5.00) for each examination."

Resolver further, That a copy of such resolutions be published in the N. O. MEDICAL AND SURGICAL JOURNAL, and also that a copy be sent to each insurance company doing business in this section.

(Signed) W. H. PUGH, M. D., Pres.
C. H. BURLEY, M. D., Secy-Treas.
H. S. HOLLOMAN.
W. C. CONEY.
G. B. BROADWAY.

On motion of Dr. Pugh the following resolution was adopted:

Resolved, That we, the members of Catahoula Parish Medical Society, and qualified practitioners of Catahoula and Concordia Parishes, do hereby inter into and bind ourselves to the following list of fees previously adopted by our Society:

Resolved further, That a copy of these resolutions be sent to the N. O. MEDICAL AND SURGICAL JOURNAL and to *The Trinity Signal* for publication: Signed—

The scientific work consisted of an interesting paper on "Gonorrhea and Multiplicity of Treatment by Dr. Coney.

C. H. BURLEY, M. D.,
Secy-Treas.

EAST BATON ROUGE MEDICAL SOCIETY.—N. O. MEDICAL AND SURGICAL JOURNAL—Enclosed please find a copy of the resolutions, from the East Baton Rouge Parish Medical Society, in regard to Dr. Aldrich's death. Kindly publish them in the next issue of the JOURNAL. Yours truly,

J. A. TUCKER, Secty. & Treas.

RESOLUTIONS.

Baton Rouge, La., Nov. 16, 1906.

Whereas, It has pleased Almighty God, in His infinite wisdom, to call from this earth Dr. R. H. Aldrich, one of our esteemed members, and,

Whereas, In his death the Medical Society of East Baton Rouge suffers an almost irreparable injury, and,

Whereas, Each member of this Society so profoundly regrets his sad and untimely death,

BE IT RESOLVED, That we hereby extend to the bereaved family of our departed friend our warmest sympathy; that we hereby express our recognition of his many sterling qualities, of his charity to his fellow men, of his beautiful devotion to his little family, of his unswerving loyalty to his friends, and finally, of his distinguished ability as a physician.

BE IT FURTHER RESOLVED, That a copy of these resolutions be sent to the family of the deceased, that a copy be spread upon the minutes of this Society, and also, that a copy be published in the local papers of Baton Rouge, and in the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL.

By the Committee:

(Signed)

C. D. SIMMONS, M. D.

B. B. REYNAUD, M. D.

J. A. TUCKER, M. D.

Medical News Items.

THE "SEA NURSE"—A "sea career" is opening for several hundreds of nurses. Two graduate nurses from a New York hospital have been placed on passenger steamships of the Hamburg-American line and more will be needed. Other first-class steamboat lines will, no doubt, follow this example, and the trained nurse will become a recognized necessity of the first-class steamship, as the physician has. The opportunities of the trained nurse are increasing very rapidly.

SIXTH ANNUAL MEETING OF THE BOARD OF GOVERNORS OF THE GEORGIA PASTEUR INSTITUTE was held in Atlanta, October 5. Dr. Henry R. Slack, President, read his report for the year, which showed that they had treated 471 patients, and of these only two have died.

NEW CHICAGO HOME FOR NURSES—The Chicago Home for Nurses has been built, and it cost \$30,000, and was the gift of N. W. Harris.

AN EPIDEMIC OF TYPHOID FEVER CAUSED BY CONTAMINATED OYSTERS.—An epidemic of typhoid fever has developed at Wesleyan University, of Middletown, Conn., due to contaminated oysters.

Several years ago a similar epidemic occurred from the same cause at this school.

MEETING OF THE PERRY Co. DOCTORS—The Perry Co. doctors held a meeting at Hattiesburg, Miss., on October 24, and a resolution was adopted to the effect that hereafter no physical examinations shall be made for less than \$5.00, the fee allowed by the companies in many cases being heretofore \$3.00. It was also voted that local agents of the insurance companies should not be permitted to make up the difference, the effect of which is that the doctors of this county will not make any more examinations until the order shall be given from the headquarters of the company for the increased fee. The resolution applies only to the old line companies, fraternal insurance operating under a different arrangement. There have been several calls for doctors to make examinations since this order was passed, but they are standing on the society resolution.

MEETING OF THE AMERICAN PUBLIC HEALTH ASSOCIATION—The American Public Health Association will hold its 34th annual meeting at Mexico City, Mex., December 3 to 7, 1906. A provisional program issued from the Secretary's office promises to be of much interest. The Executive Committee meets at the Hotel Iturbide.

RESULT OF LAST EXAMINATION BY STATE BOARD MEDICAL EXAMINERS—The result of the examinations by the State Board of Medical Examiners, which were held on October 19 and 20 inst., have been announced. There were twenty-six applicants for medical certificates, of whom the following nineteen passed: J. N. Brown, S. S. Anderson, W. F. Wild, T. C. Dye, A. G. Worley, J. A. Young, W. H. Weaver, W. W. Pugh, Morgan Smith, V. J. Funderburk, P. E. Magoun, J. P. Rayne, L. R. Young, R. McPherson Colmore, I. H. Ledin, Leander Willett, Thomas B. Younger. There were two colored men, I. J. Kane and T. H. Mims.

BOARD OF PHARMACY EXAMINATIONS—F. C. Godbold, Secretary of the Louisiana State Board of Pharmacy, announced the results of the Nov. 3 examinations held by that body at the New Orleans College of Pharmacy. The following, out of a class of nineteen applicants, passed as registered pharmacists and qualified assistants:

Registered Pharmacists—E. H. Martin, M. A. Laddore, C. A. Ridgeway and E. P. Voizin, New Orleans; J. A. Robins, Ethel, La.

Qualified Assistants—Miss A. D. Lehman, H. A. Donaldson, W. S. Fossier and J. Brunai, New Orleans; L. M. Pellissier, St. Martinville; H. M. Scroggins, Jonesboro, La.; P. F. Dastugue, New Orleans; Miss Queen Harlan, New Orleans.

The next examinations will be held in New Orleans the first Friday in February, 1907. Those expecting to appear to be examined must apply to the Secretary ten days before the time of the meeting. All applicants, even those who have failed before, will be examined. December 1 the secretary's office will be open to those who wish to apply for registration.

MISSISSIPPI VALLEY ASSOCIATION MEETING.—The Mississippi Valley Association concluded its thirty-second annual meeting at Hot Springs on Nov. 8, with the following officers elected for the year: President, H. Horace Grant, Louisville, Ky.; First Vice-President, G. Hebert, Hot Springs, Ark.; Second Vice-President, T. C. Witherspoon, St. Louis, Mo.; Secretary, Henry E. Tuley, Louisville, Ky.; Treasurer, S. C. Stanton, Chicago, Ill. A number of valuable papers were read at this meeting and Dr. Quitman Kohnke delivered an interesting and instructive lecture on the mosquito theory as to yellow fever, illustrating his remarks with stereopticon views.

CHARITY HOSPITAL BEQUEST.—In the will of Mrs. Virginia McRea Delgado \$20,000 was bequeathed to the Charity Hospital and \$10,000 to the Convalescent Home.

PERSONALS: Dr. Milton F. Smith was elected city physician of Shreveport at last meeting of city council.

Dr. J. W. Ramsey of Crystal Springs, Miss., paid the Polyclinic a visit during the past month.

Dr. C. Milo Brady made a tour of the Southern Parishes in the interest of the State Board of Health.

State Medical Inspector Dr. F. J. Mayer addressed 700 students of the State Normal School at Natchitoches on the Sanitary campaign.

Dr. Rhett Goode, of Mobile, has been elected Dean of the Medical College of Alabama. He was graduated from the school in 1871.

At the last regular monthly meeting of the Charity Hospital Board, of Shreveport, Dr. T. G. Ford was elected the president.

Among those who have returned from their vacations are the following: Dr. Rudolph Matas from Philadelphia. Dr. Matas also spent some time in New York.

Dr. and Mrs. Otto Lerch have returned from an extended tour of Europe, most of the time spent in Berlin and Paris.

Dr. Alfred Jacoby, with his wife, have returned home from Dallas where they have been spending some time with Mrs. Jacoby's family.

REMOVALS: Dr. H. L. Sanders has moved from Carson to Singer, La.

Dr. J. W. Nichol has moved from Hard Shell to De Ridder, La.

MARRIED: On Nov. 14, Dr. T. S. Kennedy, of New Orleans, to Mrs. Annie Dameron Frye, of White Hall Farm, Albermarle Co., Va. Dr. Kennedy is a professor in the Medical Department of Tulane, and one of the prominent physicians of New Orleans.

The marriage of Miss Sophie Lindheim to Dr. Alexander Cohen took place on November 14.

Dr. Charles J. McGrane was married on November 17 to Miss Genevieve Weber.

Dr. Lester J. Williams, of Melville, La., was married on October 10 at Baton Rouge to Miss Mayme Steele of that city.

Dr. John N. Furmiss, of Selma, Ala., was married in that city on November 6, to Miss May Hooper.

Dr. Samuel H. McLean was married to Miss Lucille Maud Wilkinson at Jackson, Miss., on November 21.

Dr. Jas. V. Bonnette, of Pollock, La., was married on Nov. 7, at Alexandria, La., to Miss Helen Saunders. Dr. Bonnette is spending his honeymoon in New Orleans, and is attending the Polyclinic.

DIED: Dr. W. M. Marshall Thompson, a prominent physician of Opelousas, La., died at his residence on Oct. 28, aged 77 years.

Dr. J. H. Blanks, of Meridian, Miss., died at Touro Infirmary in New Orleans on Oct. 19.

Dr. Gustave de Monsabert, of Windom, La., died suddenly in this city on Nov. 12, aged 36 years. Four days before his death he was married to Miss Naomi Picheloup, of Cade, La. The doctor was quite well known, and was a graduate of Tulane Medical College.

Dr. Henry O. Weston died at Bay St. Louis, Nov. 22, aged 23 years. The deceased was a recent graduate of Tulane, and had been married only a few months.

Book Reviews and Notices.

All new publications sent to the JOURNAL will be appreciated and will invariably be promptly acknowledged under the heading of "Publication Received." While it will be the aim of the JOURNAL to review as many of the works received as possible, the editors will be guided by the space available and the merit of the respective publications. The acceptance of a book implies no obligation to review.

The Clinical Study of Blood-Pressure, by THEODORE C. JANEWAY, M. D. D. Appleton and Co.

This important subject, which dates back to many years, has taken a new impetus as the mechanical contrivances have been improved, to allow of quite accurate reading in ordinary works. The present book is a history of, and a guide to the use of the Sphygmomanometer. There are seventy-five illustrations in the text, many in colors, and no doubt some profit will accrue from the study of this work, to those who care to read it properly.

DUPAQUIER.

International Medical Annual. E. B. Treat & Co., New York, 1905.

One of the good year-books we know of. It is chiefly a year-book of treatment. As claimed, it is most complete and satisfactory for whom has hardly any time to spare reading exhaustive articles and monographs.

DUPAQUIER.

The Practice of Medicine. TYSON. 4th Ed. P. Blakeston Son & Co., Philadelphia.

This excellent text-book, for practitioners and students, with special reference to diagnosis and treatment, is now presented in its fourth edition revised and enlarged with 240 illustrations, including color plates. The most important changes in the present edition will be found in the section on Animal Parasites, which has been revised by Dr. Allen J. Smith, a recognized authority on this important and practical subject.

DUPAQUIER.

International Clinics. Vol. IV., 15th Series, 1906. J. B. Lippincott Co., Philadelphia and London.

The contents of this volume are treatment of psoriasis; therapeutic value and mode of action of physiologic saline solution; treatment of some common gastric disorders; internal use of carbolic acid; nervous disorders in which psychotherapy may prove of value; empyema with report of thirty cases; value of "post-tussive suction" as a sign of excavation in the lung;

a method of abdominal palpation; later stages of cirrhosis of the liver; the thyroid glands; its anomalies of secretion and their manifestation and treatment; symptomatology and diagnosis of Malta fever, with report of additional cases. The results of operations, such as gastroenterostomy, pyloroplasty, etc., in the treatment of diseases of the stomach; phlebitis, thrombosis and embolism, following abdominal and pelvic operations; study of the clinical course of joint tuberculosis by means of the X-Rays; post-operative surgical neurasthema, with special reference to cases; etiology and early diagnosis of acute peritonitis, with the report of illustrative cases; cysts of the lesser peritoneal cavity; diagnosis of surgical diseases of the kidney. Study of ectopic pregnancy, with report of twenty-seven cases; sixty cases of extra-uterine pregnancy; pelvic hematocoele and hematoma; medical treatment of the menopause. Syphilitic neuritis of the optic nerve, with impending blindness successfully treated with calomel injections; experimental study of the effects of Roentgen Rays upon blood-forming organs, with special reference to the treatment of leukemia. A contribution to the study of eosinophilia.

DUPAQUIER.

Pediatrics and Orthopedic Surgery, by ISAAC A. ABT, M. D., and JOHN RIDLON, A. M., M. D. The Year Book Publishers, Chicago, 1906.

This little volume is the seventh of the practical medicine series and is intended for the medical practitioner. It is replete with interesting clinical data culled from various medical journals. The editor has interspersed some sound logical comments.

LARUE.

A Treatise of Surgery, Vol. II, by GEORGE RYERSON FOWLER, M. D. W. B. Saunders & Co., Philadelphia and London, 1906.

This large book is the last work of the late Doctor Fowler, whose worth as a surgeon was universally recognized in the medical world. His untiring energy and great skill were admired by all. In this volume one finds, as it were, a resume of his surgical knowledge, with an expose of the author's operative methods. Special consideration is given to abdominal surgery, in which he was so proficient. We heartily recommend this medical, or rather surgical, legacy to the student and general practitioner.

LARUE.

Pharmacology and Therapeutics, by ARTHUR R. CUSHNY, M. A., M. D. Fourth Edition. Lea Bros. & Co., Philadelphia and New York.

To those who are familiar with this work it is superfluous to say of the new edition anything more than that the author has brought this work up to date and revised it in accordance with the new Pharmacopeia. Cushny's book is, in the author's opinion, the one authoritative work on Pharmacology published in the English language. The work on every page gives unmistakable evidence that it is the production of a man who is a master of his subject. Prof. Cushny's knowledge of the literature of his subject and his own experience as an investigator, give him unusual qualifications to speak with authority on the action of drugs. The chapters on alcohol, chloroform and ether and digitalis, are monographic in their completeness. We most unqualifiedly recommend this book to the thoughtful physician who wishes to renew his knowledge of the "Action of Drugs." Those who are looking for "Therapeutic Hints" or "Rules of Thumb" in treatment will be disappointed.

J. T. H.

Laboratory Guide in Experimental Pharmacology, by CHARLES W. EDMUNDS, A. B., M. D. and ARTHUR R. CUSHNEY, A. M., M. D. (Geo. Wahr, Ann Arbor, 1905)

As indicated by the title, this volume will interest only teachers of Pharmacology and such medical students as have the good fortune to take such laboratory courses in experimental pharmacology. For such it is excellently adapted, and should prove useful. J. T. H.

Diseases of Metabolism and of the Blood, Animal Parasites, Toxicology. CABOT-SALINGER. D. Appleton Co., New York.

This is the second volume of the series of books entitled *Modern Clinical Medicine*, a translation of "Die Deutsche Klinik," under the general editorial supervision of Salinger, edited by the eminent specialist on the subject of which it treats, Richard C. Cabot, according to the plan of the publication. This volume begins with a discussion of the quantitative analysis of disturbances of metabolism, first relating to the consumption of food in the healthy, and second to the food requirement of the sick. After which the clinical side of the diseases of metabolism is exhaustively gone into, and the treatment in all cases is thoroughly discussed. Then follows: Blood and blood examination, blood diseases. Eighty pages are contributed to the question of animal parasites, and about twenty pages to the important poisons and their treatment. No work in English treats so completely of the constitutional diseases. Backed by the best minds in Europe, annotated by our eminent editor, the work commands attention and respect. DUPAQUIER.

Practical Medicine Series. HEAD-BILLINGS-SALISBURY. Year-Book Publishers, Chicago.

This is Volume I of the Series, 1906, covering the ground of general medicine. No more careful review of the year's progress, a selecting one at that, could be found on the following disease of the respiratory and circulatory organs, blood and blood-making organs, infectious diseases, metabolism diseases, ductless glands, rheumatic and kidney diseases.

DUPAQUIER.

Treatise On Diagnostic Methods of Examination. SAHLI-KENNICUT-POTTER. W. B. Saunders & Co., Philadelphia and London.

An English translation of Sahli's great work with additions by the American editors. All methods of examination and explanations of clinical phenomena are given. The value of clinical estimation of blood-pressure with a description of new instruments, is reviewed by a specialist on the subject, Theodore C. Janeway. Osmotic pressure, cryoscopy, staining urinary pigments, electrical examination are expounded in the most lucid manner. This is a great work, indispensable to the practitioner.

DUPAQUIER.

International Clinics. Vol. 1, 16th Series. Lippincott.

This volume contains special articles on Exophthalmic Goiter, gastrop-tosis, coughing and its relation to treatment, dechloridation in heart disease, venesection, membranous tonsillitis, mitral stenosis in advanced stage, oxalic acid deposits in urine, poisoning by wood alcohol, tendons, carcinoma of the pyloric end, renal calculus, carcinoma of the tongue, pulse in surgical disorders. Eclampsia, chorio-epithelioma in pregnant

uterus, rupture of the uterus; acute hemorrhage, eosinophilia, and a review on the progress in treatment, medicine and surgery, during 1905.
DUPAQUIER.

Case Teaching in Medicine. CABOT. D. C. Heath & Co.

This is a series of graduated exercises in the differential diagnosis, prognosis and treatment of actual cases of disease, advantageous both to teachers and students. Types of cases that train the mind to observe and help in practice to clear puzzling cases.
DUPAQUIER.

Materia Medica and Therapeutics, An Introduction to the Rational Treatment of Disease, by J. MITCHELL BRUCE, M. A., LL. D., M. D.
W. T. Keener & Co., Chicago, 1906.

Students will find much in this work to commend it. The text is presented in a more intelligible and rational form than is found in most works of this kind intended for students. It has been made as interesting as the subject will permit. The plan of the author in the description of the special therapeutics, which plan consists in systematically tracing the physiological actions and uses of the different drugs in their passage through the body, from their first contact with it locally until they are eliminated in the secretions, is a most excellent arrangement. We notice the addition to the work of an entirely new part, which contains an account of the materia medica and therapeutics of the drugs in the Indian and Colonial addendum to the British Pharmacopeia.
STORCK.

A Manual of Acute Poisoning, by JOHN W. WAINWRIGHT, M. D. E. R. Pelton, New York.

This little manual contains in a condensed form much information in regard to acute poisoning. The information given pertains to the classification of poisoning agents; also to the varieties and individual substances usually met with in emergency poisoning with special symptoms, simple tests, chemical antidotes, physiologic antagonists and treatment. It also gives methods for use in first aid to the injured.
STORCK.

Physiology of Digestion, by ERNEST H. STARLING, M. D., F. R. S. W. T. Keener & Co., Chicago, 1906.

We owe much to Parlow's masterly researches, which elucidate many of the digestive changes which take place in foodstuffs. He has advanced our knowledge in this particular branch of physiology. The fact that the pancreas is normally excited to secrete in response to stimuli originating in the gut and not, as Parlow thought, by means of the nervous system, is here emphasized by Dr. Starling. Later researches have proved that the acceptance of Parlow's conclusions by many physiologists was premature. To the student and physician who has not kept abreast of the work going on in this branch of physiology this work has much enlightenment to afford.
STORCK.

Publications Received.

P. BLAKISTON'S SON & CO., Philadelphia, 1906.

A Text-Book of Elementary Analytical Chemistry Qualitative and Volumetric, by John H. Long, M. S., Sc. D. Third Edition.

Quiz Compend. A Compend of Genito-Urinary Diseases, Syphilis, by Chas. D. Hirsch.

Retinoscopy, by James Thorington, M. D.

Text-Book on Diseases of the Heart, by Graham Steel, M. D.

F. A. DAVIS CO., Philadelphia, 1906.

Studies in the Psychology of Sex, by Havelock Ellis.

A Primer of Psychology and Mental Disease, by C. B. Burr, M. D.

The Ear and Its Diseases, by Seth Scott Bishop, M. D.

A Treatise on the Motor Apparatus of the Eyes, by George T. Stevens, M. D.

Genito-Urinary Diseases and Syphilis, by Henry H. Morton, M. D. 2d Ed.

D. APPLETON & CO., New York and London, 1906.

Modern Clinical Medicine, Diseases of the Digestive System. Ed. by Frank Billings, M. D.

MISCELLANEOUS.

Experiments in Practical Culicidal Fumigation, by Arthur I. Kendall, Ph. D. (Government Printing Office, Washington, D. C.)

Reprints.

The Practical Cure of Aneurysm; (2) Further Experiences in the Radical Operations for the Cure of Aneurysm by the Author's Method of Intra-Saccular Suture; (3) The Suture in the Surgery of the Vascular System, by Rudolph Matas, M. D.

MORTUARY REPORT OF NEW ORLEANS.

(Computed from the Monthly Report of the Board of Health of the City of New Orleans.)
FOR OCTOBER, 1906.

CAUSE.	White.	Colored.	Total.
Typhoid Fever.....	5		5
Intermittent Fever (Malarial Cachexia)	2	1	3
Smallpox.....			
Measles.....			
Scarlet Fever.....			
Whooping Cough.....			
Diphtheria and Croup.....	2	1	3
Influenza.....	4		4
Cholera Nostras.....			
Pyemia and Septicemia	1		1
Tuberculosis.....	40	46	86
Cancer.....	19	7	26
Rheumatism and Gout.....	4	1	5
Diabetes.....	2		2
Alcoholism.....	2	1	3
Encephalitis and Meningitis.....	4	1	5
Locomotor Ataxia.....	1		1
Congestion, Hemorrhage and Softening of Brain.....	13	5	18
Paralysis.....	2		2
Convulsions of Infants.....		3	3
Other Diseases of Infancy.....	26	5	31
Tetanus.....	1	8	9
Other Nervous Diseases.....	1	1	2
Heart Diseases.....	46	30	76
Bronchitis.....	3	5	8
Pneumonia and Broncho-Pneumonia.....	15	14	29
Other Respiratory Diseases.....	2	6	8
Ulcer of Stomach.....			
Other Diseases of the Stomach.....	5		5
Diarrhea, Dysentery and Enteritis.....	18	13	31
Hernia, Intestinal Obstruction.....	3		3
Cirrhosis of Liver.....	9	3	12
Other Diseases of the Liver.....	3		3
Simple Peritonitis.....	1		1
Appendicitis.....		4	4
Bright's Disease.....	22	17	39
Other Genito-Urinary Diseases.....	8	1	9
Puerperal Diseases.....	2	2	4
Senile Debility.....	14	13	27
Suicide.....	9		9
Injuries.....	23	10	33
All Other Causes.....	12	9	21
TOTAL.....	324	207	531

Still-born Children—White, 27; colored, 22; total, 49.

Population of City (estimated)—White, 245,000; colored, 88,000; total, 333,000.

Death Rate per 1000 per annum for Month—White, 15.70; colored, 28.33; total, 19.13.

METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmospheric pressure 30.01
Mean temperature 68.
Total precipitation 1.08 inches.
Prevailing direction of wind, north.

New Orleans Medical and Surgical Journal.

VOL. LX.

JANUARY, 1907

No. 7

Original Article.

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. A complimentary edition of one hundred reprints of his article will be furnished each contributor should he so desire. Covers for same, or any number of reprints, may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

Mitral and Aortic Insufficiency or Regurgitation.*

By ELISHA W. BREAZEALE, Campti, La.

Other organs in the human body may lose their functions, and in some instances be extirpated, and yet the patient, slightly crippled, may live out a useful life. Not so with the heart. A disturbance of its functions affects every portion of the human frame, and any organic lesion brings the patient to an untimely grave. Its integrity is of vital moment, and yet constantly exposed to the contaminating influences of other diseases.

Within the complex mechanism of the human form the knowledge of the half of which yet remains hidden, we find this organ guided, goaded, and stirred by the ever-changing influences of the nervous system. No matter what part evolution has played in the development of mankind, from the dim and distant past to the present this organ, as we find it to-day, is wonderfully con-

*Read before the Bi-Parish Medical Society at Natchitoches, La., Dec. 5, 1906.

structed, with its tributaries of arteries and veins supplying every element necessary to maintain the health and function of every minute tissue and cell.

From the moment of conception a vitalized structure is started on the way of a separate existence. The first germ essence of life is imparted. When birth manifests that nature is ready to supply and maintain the newly formed individual, the heart sets forth on its ceaseless course and never stops for one moment its untiring efforts to uphold and promote the integrity of a being that the Omnipotent has allowed to be born. Whether we wake or sleep, give way to the fierce passions of anger, wrapped in the agonizing clutches of pain or, imbued with astral fire, mount the heights of Olympus; no matter by what circumstances surrounded or what hopes or joys or yearnings beset our souls, still onward goes that pulsating organ, performing its endless duty. At last worn out, following that inherent law of all organized structure, life's current slowly ebbs, age totters the frame, and the once strong being passes into that sleep that knows no awakening.

The health, the happiness, the existence, the very life of the individual depends upon the ability of the heart muscle to perform its work properly. Without fear of contradiction we state that the heart is the most vulnerable organ in the human body.

In this latter day teaching all diseases are germ produced. That is, there is generated in the system by a specific bacillus an alkaloid or ptomain which is taken up by the blood current and which manifests itself in the individual by symptoms denoting the special disease. There is by nature a protecting influence engendered. This protection is due to the phagocytic process of the white blood corpuscles taking up and destroying the special germs of disease, and to an anti-toxin which nature elaborates in her economy.

That these germs, whether they be of typhoid fever, pneumonia, glanders, anthrax, variola, tetanus or others, also have a life cycle to perform, there is no doubt.

As the origin of the first animal cell remains a hidden secret, so are we utterly unable to account for the origin of any of the various germs that produce disease. Facts stamp themselves indelibly upon us, and as we look out upon this broad and beautiful

earth, clad in its living green, shedding radiance and glow to all organized structure, peopled with its manifold progeny of insect, fowl, animal and human kind; or view the firmament studded with its living sapphires doing homage to Luna's peerless light, and the whole crowned by the brilliancy of the glorious orb of day, we realize its vastness. Unable to account definitely for the origin of what we find, still we see the birth, development, zenith, decline and decay, and passage of each individual organism into those constituents of which it was originally composed, lacking that spark or element that held together these constituents that made a harmonious whole—that spark or subtle substance called life!

These various germs or micro-organisms, finding a suitable soil in the human economy for their multiplication and growth, reach the height of their development, and, as the human form generates a toxin which proves poisonous to the individual, unless thrown off by the secreting apparatus, so do these germs generate a toxin which is deleterious to the health of the individual. This toxin circulating in the blood not only poisons the tissues supplied by this life-giving element, but has a destructive effect upon the heart muscle itself. Its vitality is lowered; its own nutrient supply is inferior. The trophic as well as the inhibitory nerves lose their function and thus the mainstay, the pilot, the veritable *all* of the human frame becomes poisoned, stupefied, and, at last unable to further perform its function, death results. These effects more readily result from the toxin generated by the variola, diphtheria and typhoid bacilli, while that generated by the rheumatic, syphilitic or choreic, being potent but less rapid in its destructive work, produces structural changes in the heart more so than any other organ.

Following the law of nature, constant irritation to a part produces a new growth or an effort to supply a resisting power. As we find in the alcoholic an interstitial growth of fibrous tissue in the liver due to the constant irritation of that organ in its efforts to eliminate the alcohol, and as in chronic interstitial nephritis we find a multiplication of fibrous tissue in the body of the kidney, at the expense of the secreting structure, due to the constant efforts of the kidney at elimination of the poisonous pro-

ducts of gout, so we find in the heart muscle the presence of the rheumatic, syphilitic and choreic poison in the blood, a vegetable growth taking place upon the edge of the valves.

The left heart performing the bulk of the work, and upon the integrity of its valves much depends, suffers first in the great proportion of heart lesions. Mitral and aortic insufficiency or regurgitation being the most frequent, I will confine myself strictly to these lesions.

Preceding the pathological effects upon the valves of the heart, there ensues an acute or chronic inflammation of the endocardium. Many cases of long drawn out febrile conditions following an attack of rheumatism, or idiopathic, as we are unable to discover the cause and must class these under the general head of continued fevers, are no doubt cases of endocarditis. These fevers of more than two weeks duration, which do not yield to the therapeutic test for malaria, and in which the typhoid element does not enter, should raise our suspicions.

The heart, situated as it is, receiving and driving forth with constant accuracy every ounce of the blood, must possess a high resisting power, or else easily fall prey to the perpetual actions of the toxins in the blood. The fact is, we pay too little attention to the heart, and frequently mild endocarditis goes by unnoticed. These slight inflammatory conditions of the endocardium, as well as the leaflets, leave their effects too often in a thickening of the valves, a slight contraction of their edges preventing their ready approximation, and a leakage occurs. The patient makes a good recovery as regards the original disease, but with a permanently damaged heart, which is susceptible to further changes on the slightest provocation.

Recurrent attacks of rheumatism generating a poisonous substance, that as yet has not been isolated, produces further changes in the valves, a further contraction of their edges, lessened approximation, and at each contraction of the heart a current of blood is thrown backwards into the left auricle, producing a distinct regurgitant murmur. The physician is now for the first time aware of the changes that have taken place.

This murmur being systolic in time, point of greatest intensity at the apex, transmitted to the axilla, and heard at the inferior

angle of the scapula behind, is pathognomonic. Nature, ever ready in its manifold duty, readily compensates for the regurgitant flow and a slight hypertrophy of the left ventricle takes place. This hypertrophy keeps pace with the destructive process going on in the valves and compensation is maintained. On inspection and palpation we find the apex slightly displaced downward and to the left. This condition prevails in a number of hearts and goes by unobserved by the patient, no symptoms whatever manifesting themselves. Occurring in young subjects, with a history of rheumatism or chorea, from which diseases they have completely recovered, they appear as hale and hearty and as robust as any subject of the same age and suffering from no organic lesion.

These patients, if they have reached the age of discretion, should be told of their condition and warned as regards their vocation. A sufficient amount of exercise conducive to health should be enjoined, but they should live a smooth, even and non-dissipated life. Should they be adolescents their parents or guardians should be informed and thus given the opportunity of giving the proper care and advice.

This murmur, soft, breezy in character, with the physical signs as I have enumerated them, and uncomplicated, is easy of recognition. We are, however, seldom called upon to make an examination and hence the lesion goes by undiscovered.

Sooner or later the subject with a mitral regurgitation, not dying from an intercurrent disease, manifests symptoms and conditions which force him to seek the aid of a physician, but only in vain as far as recovery is concerned. We can do much, however, towards alleviation. Dyspnea is the first symptom noticed. The patient finds he cannot do the same amount of exercise without becoming short of breath; cannot lie down without oppression. An edematous condition of the feet will be noticed, especially at night, which disappears by morning. Soon a little hacking cough sets up, with now and then the expectoration of sputum streaked with blood. On examination we now find the symptoms in an exaggerated form with a weak and feeble pulse, though not altered as to number of beats, but with sometimes a skip. A mental picture is formed in our minds which clearly outlines the pathological condition which prevails.

Compensation is failing. The left ventricle, much hypertrophied, has become dilated. The left auricle, naturally composed of lessened muscular structure and intended solely as a receptacle for the blood as it returns through the pulmonary veins from the lungs, from the constant pressure of blood forced into it, both through the weakened mitral valve at each contraction of the heart, and poured into it from the lungs, is also much dilated. The blood is dammed back upon the lungs, these becoming congested; the air vesicles are crowded upon, with shortness of breath. A weakened condition of the capillaries ensues, a leaking out of the liquid elements of the blood into lung spaces and edema and cough result.

The right ventricle, endeavoring to drive the venous blood through the lung, meets the backward flow of arterial blood. In its efforts to force the blood through it has hypertrophied, and for a short time compensation is further maintained. Now, failing longer to do double duty, it dilates and leakage takes place into the right auricle, hence tricuspid insufficiency. The blood, now thrown backwards is forced upon the jugular veins, with pulsation of these vessels and general venous stasis occurs throughout the body. In turn the liver, stomach, spleen and kidneys become congested; digestion fails; albuminuria occurs, and the patient is indeed a pitiable wreck. In the female, abortion is frequently produced due to the hyperemic condition of the uterus. The blood vessels throughout the body become disorganized, lose their elasticity, venous engorgement, filtration of the liquid elements of the blood into the subcutaneous connective tissue of the body, ascites and anasarca ensue first of the feet and legs, then of the trunk, face and upper extremities, and finally into the pleural and peritoneal cavities.

A patient presenting these symptoms and conditions is almost beyond medical aid. We have at our hand one and only one potent remedy, and since the destructive process has injured the organic structure beyond repair, we cannot hope to cure, but yet may make the patient comparatively comfortable. Digitalis is our only standby. Acting upon the heart muscle, it prolongs its diastole and strengthens its systole, thus allowing the enlarged left ventricle to become more filled, and by strengthening its contraction, the

blood current is driven more forcibly out into the circulation. The slack is taken up as it were, the symptoms ameliorated and the patient made easy. Unfortunately, however, the remedy, in time, will lose its influence and the heart muscle completely worn out, its valves obliterated, its auricles and ventricles dilated, ceases to respond and the beginning of the end is at hand.

Digitalis, powerful for good in mitral insufficiency with failing compensation, is a dangerous remedy in other heart lesions, especially in that of aortic regurgitation, which is the next most frequent heart lesion we encounter.

This form of valvular disease occurs in from 30 to 50 per cent. of all cases of chronic heart lesions, and as a rule we are too lax in our examination. Hearing a murmur, we take it for granted it is mitral insufficiency and prescribe digitalis.

Aortic regurgitation, sometimes of microbic origin, is more frequently caused by muscle strain. It occurs in men more frequently than women, in those devoted to outdoor life and in whom a great amount of muscular exertion is put forth, such as the baseball and football player, bicyclist and athlete. In young adults, often under 40 years, it is the most suddenly fatal of all organic lesions. Occurring in after life, in the dissipated and hard drinker, we find considerable arteriosclerotic changes, the arteries under the finger being cord or quill-like, stiffened and hard.

Here the aortic valves, having become ruptured by violent muscular strain or pure arteriosclerotic change, due to alcoholism or syphilis, fail to approximate themselves. With every pulsation the blood is sent pounding against the aorta, but regurgitates back into the left ventricle. The ventricle seeking to restore the balance redoubles its energy and hypertrophies. The blood is thus driven into the aorta with great force, swelling the arteries to extreme fullness which, however, falls promptly away, owing to the backward flow into the left ventricle, at the same time with the forward flow into the arteries and capillaries.

This sudden falling away of the pulse from extreme distention to collapse is very characteristic and is known as the waterhammer or Corrigan pulse. It may be even visible in the exposed arteries, as the carotid, temporal and radial. The abrupt jerking impulse, with sudden recoil imparted to the finger in the pulse, is

easily recognized, yet we fail to find it as strong and hard as would be expected from its appearance. The result of this lesion is the largest heart met with in morbid anatomy, and from its size it is called the "bovine" heart. The cavities are large, the walls much thickened and furnish an instance of eccentric hypertrophy.

The gradual enlargement of the ventricle ultimately causes the mitral valve to yield. Compensation is still maintained for a time by hypertrophy of the left auricle, which yields after a time, becomes dilated and allows the blood to engorge the lungs. Dropsy and dyspnea are characteristically absent until compensation ceases, which is never the case until the mitral valve begins to yield. Early symptoms are dizziness with faintness, especially on rising quickly. Palpitation ensues on slight exertion. In advanced cases the patient complains of a constant beating or pulsation all over the body. In fact the action of the heart is so forcible the head is jerked with each pulsation. The patient is apt to be troubled by dreams, owing to the disturbed circulation in the brain. Permanent mental symptoms may result from this cause, including insanity and suicidal tendency. Pain in the region of the heart is constant. Angina pectoris, due to a failure of nutrition by the coronary arteries, owing to their sclerotic changes, is distressing.

On inspection we find a bounding, tumultuous apex beat, with prominent left precordium, and visible pulsation in the arteries, even in the most distant parts, as the dorsalis pedis. A murmur is heard with the second sound of the heart; long, loud and blowing. Its point of greatest intensity is at the base of the heart and transmitted up and down the sternum, and may be detected along the course of the great vessels. A double femoral murmur is frequently heard, and, in fact, the aortic regurgitant murmur is probably the most widely conducted of all cardiac murmurs.

Aortic incompetency is a grave condition, and is the valvular disease in which sudden death overtakes the patient. The line of treatment differs as widely from mitral insufficiency as the two diseases differ from each other in symptoms and pathology. In one we find a weak and feeble pulse; in the other a bounding and high tension one. In one the integrity of the walls of the arteries is preserved, in the other sclerotic changes have taken place. Digitalis in one strengthens, tones and reinforces a jaded, weak and feebly

acting heart, hence indicated; in the other would goad a violent, hypertrophied, overacting heart to destruction. We should use caution and not prescribe digitalis indiscriminately, because, without due consideration, a death may result clearly chargeable to us.

In mitral insufficiency treat the engorged system. Though we cannot hope to cure, we can give relief for a time. In aortic regurgitation we have a distinctly contrary condition, therefore prescribe rest, absolute rest in the recumbent position. This alone will reduce the pulsations 10 to 20 beats per minute. Give drugs whose actions we might expect to counteract the cause producing the trouble. If due to muscle strain, where a valve leaflet is torn, reduce the pulsations and enjoin quiet. To this end *veratrum viride* is our remedy, combined with such tonics as strychnin and arsenic. If due to syphilis, where we find the sclerotic changes, then our mercury and iodide of potassium serve us well. Combine this with tonics and in both conditions put the patient to bed until the symptoms are ameliorated. So outline his habits as not to subject him to violent exercise. Avoid all stimulants and excitements and impress upon him to live as smooth and easy a life as is compatible with the condition that prevails.

Clinical Report.

Report of Case of Probable Black Water Fever.

By DR. J. B. CUMMINS, Wyatt, La. and
DR. E. M. DUPAQUIER, New Orleans, La.

Dude French, male, age 38, born in Ohio, had lived in Arkansas and Louisiana for many years, no history of any venereal diseases.

Patient had been in robust health until about the middle of September, 1906, when he began chilling at more or less irregular intervals. He would have a chill, take some calomel and quinin and go on with his work, logging and other work about the lumber mills. His color was bad, flesh reduced and seemed to be not doing well at all, though up and going all the time.

On Sunday, September 30, while at an unveiling, he had a chill; on Wednesday, October 3, he had a chill or rigor, which was followed by profuse bloody urine, which urine, viewed in a white porcelain vessel, looked black, but when put into small clear glass bottles and held before the light, looked red.

This condition of hematuria, or hemoglobinuria, continued until the evening of the 5th, then the water cleared to the normal condition.

In the meantime the patient's skin had become very yellow, as also the whites of the eyes. Patient improved slowly, skin cleared considerably, appetite improved smartly, but the patient looked anemic.

On the 9th and 10th the patient sat up some in his room, but did not leave his room; on the 11th he went to the dining room; in fact, walked about the house, but not out of the house.

On the morning of the 12th, without the knowledge of the family, he left the house, without coat or vest, and was out in the cool, damp, open air for more than half an hour. On returning to the house he complained of being cold; at 12 o'clock noon he had a chill; at 2 p. m. the black urine returned and continued until 8 a. m. of the 13th, when death occurred.

TREATMENT: Water in large and frequent draughts, water by enema, warm water to surface by sponging.

When hemorrhage was on, a few doses of spirits of turpentine were given; after first hemorrhage ceased, hyposulphite of soda was given with a view to getting uric acid products out of the system. Spirits of nitre was given to keep kidneys secreting well.

NOTE—Dr. J. B. Cummins, one of the Polyclinic Class (1903), sent Dr. Dupaquier the above report of the case of Blackwater fever. Lecturing on Blackwater fever before the Tropical Medicine class, Dr. Dupaquier begged his fellows living in the rural districts of the Southern states, to send him specimens of the red or black urine of all cases they met, together with a short history. His object in getting the urine is not only to study the urine of cases that are apparently Blackwater fever, but, to possibly detect in these so-called cases of hematuria, cystitis, etc., the ova of the *Schistosomum hæmatobium*, or the disease called Bilharziosis, the introduction of which into America has been a recent occurrence. This

is not the proper time and place to write fully about the bilharzia, as it is here our purpose only to present the short clinical report of a case of Blackwater fever from Dr. Cummins, occurring right at our own door, as it were.—[E. M. D.]

Louisiana State Medical Society Proceedings.

(EDITED BY PUBLICATION COMMITTEE).

P. L. Thibaut, M. D., Chairman.

MEETING OF 1906.

SECTION ON GENERAL MEDICINE.

(Continued.)

DR. R. W. FAULK read a paper on

Scarlet Fever, with Clinical Report of a Case.

Scarlet fever is more to be dreaded than any of the exanthemata, variola not excepted, because with this we have a dual means of prevention, vaccination and isolation, while the treachery of the former, like an unseen foe, works so mysteriously that the innocent victim has but little means of escape. The disease once introduced into a community is very hard to eradicate. Even where physicians and health authorities are vigilant sporadic cases appear, and it is impossible to trace the contagion.

The greatest danger lurks with the mild cases, where it is possible for the disease to pass unnoticed; and often when it is suspected by members of the household and not reported to the health authorities because of the discomforts of quarantine. That the poison clings to clothing and rooms I have seen verified. The physician's buggy may be a source of contagion if he is not careful to protect his person while visiting the sick.

Domestic animals, the cat and the dog, may have the disease, so the authorities say; and I treated two little boys, where the parents suggested that the children caught it from the house cat.

In another case, where the proof was more positive, a water spaniel, which was very much prized by the family, presented every clinical symptom of scarlet fever, and before the animal was fairly well the only child, a boy of fourteen, was stricken with the typical disease.

These observations followed outbreaks of scarlet fever in Monroe, La., in 1900 and 1903. Most of the cases were mild, but a good many were followed with glandular and ear trouble. Owing to the mildness of the first cases the trouble became widespread, and a few adults were attacked. It was noted that more persons suffered with sore throats than usual, which were no doubt scarlatinial. A dozen or more children died, and the fatalities seemed to fall hard on certain families, while their neighbors' children recovered. This was specially noticeable and sad where the only two children of a family died, and two others out of a family of five, and cousins to the former children, died. The late Dr. T. Y. Aby saw these cases, and to him I am indebted for the statement that they were virulent from the beginning and death resulted from the anginal complications.

The undertaker who buried the first child died five days afterwards from septicemia. He introduced a siphon into the child's stomach, and in the evacuation of same inoculated a small sore on the back of his left hand.

As before stated, the disease is hard to eradicate, and ever and anon a case shows up in our community. In one subject I have treated a second attack. The last was very severe, and I wish to report it. This child, a girl aged nine, was treated by me in April, 1904. She was not very sick at that time, and the desquamation was slight. Rigid quarantine was carried out and the premises thoroughly cleansed. The second attack was contracted from a younger sister (the children sleeping together), who, subsequent events proved, had had scarlet fever, which was not diagnosed. The interval between the two attacks was about twenty months. November 22, 1905, this little miss complained of her ear hurting and did not rest well that night. She went to school that day and returned home in the afternoon sick; that night (Thursday) she had fever with emesis. Friday morning she was right sick, vomiting and rash over chest. Her temperature rose gradually in

spite of efforts to control same, and by Sunday morning reached 105° F. Pulse was rapid, so much so as to be hard to count, and weak, unable to separate heart sounds. A deep scarlet rash covered the entire body; and the child lay in a semi-comatose state. Kidneys had not acted well.

Heat from the body was intense, and the spectacle far from pleasant. Dr. A. H. Gladden responded as a consultant. I advised full doses tincture digitalis with antipyrin. This was used, also salt water enemata and the wet packs as follows: Body wrapped in towels wrung out of warm water over which were placed towels from ice water, latter were changed as soon as they began to get warm, ice cap to the head. This was continued till the fever responded, and by evening the clouds had cleared some. From this time there was a gradual improvement till the 29th, when an enteritis sent the temperature up to 104° F., with a remission that night, and 105° F. the evening of the 30th. December 1 temperature reached 105° F.; again on the 2d, after which it never went above 104° F., playing between 104° F. and 101° F. till the morning of the 12th, we had an intermission. I present you here a temperature chart accurately kept. December 16 convalescence was fairly established, and the case went on to recovery without sequelæ. At the height of temperature sudanival vesicles covered the body. Desquamation was afterwards complete. The thick skin of the palms and the soles came off in great flakes, and the fingers peeled like inverted glove fingers.

But the prescription of antipyrin and tincture digitalis was replaced with phenacetin and brandy. It was found that two grains of phenacetin with two drachms of brandy given at intervals of three to five hours kept the temperature down with less worry and distress to the patient than the continuous use of baths. The pulse was not depressed by the phenacetin, and beneficial results seemed always to follow its use.

My experience with this drug in treating scarlet fever cases has always been favorable, and I agree with Nothnagel, who says "I have gained the impression that in sepsis the administration of small quantities is of advantage at least in so far as the drug lessens the discomfort of the patient."

The child's mouth was kept clean, and though no distress from

the throat and nose, a mild antiseptic spray was used twice daily. The enteritis was managed along the general lines as laid down for that trouble. Patient was not allowed to sit up for fully a week after fever subsided; and gradually returned to health on a careful diet, and a tonic of 1/60 gr. dose of strychnin.

I have had no experience in the use of antistreptococcic serum, but would use it when other means had failed, and death threatened from sepsis. The idea is not supported by those who have studied and written on the subject, that scarlet fever is due to a streptococcus, though the assumption is that secondary infection with the streptococcus is the determining cause of death of some fatal cases. A chapter in "Progressive Medicine," Vol. VI., No. 1, 1904, is of interest on this subject.

Dr. Surghnor, Monroe, La., treated a child four years old with scarlatina of medium severity. The child had a croupous cough which continued, and in about seven days the respiration became embarrassed. Examination of the fauces was negative, though he concluded to use diphtheretic antitoxin. This could not be secured till the following day, by which time the respiration was very difficult, and he did not expect the child to live. Antitoxin received and used 1500 units at 3 p. m., and improvement was noticed in four hours. The following day 2,000 units were used, and the next day 2,000 units, with recovery.

The past month I treated a girl six years old with the dual affliction, scarlet fever and varicella. The child was not very sick, and interest attached to the case because of the very striking eruption of both diseases at the same time. I was fortunate to secure a picture of the child, whose friendship I completely won, just as she was getting well. Let me show you the picture, and see the typical "Strawberry" tongue and the desquamating palms of the scarlet fever while on the forehead, and two places on the chest, the dessication and the superficial crusts consist of varicella.

DR. A. B. NELSON read a paper on

Diagnosis and Medical Treatment of Gall Stones.

Gall stones and cholelithiasis are terms applied to that condition which results from the precipitation of cholesterin from bile and from the combination of bilirubin and lime, which form insoluble

compound. They are usually formed in the gall cyst and passing from this through the cystic and common ducts into the duodenum produce what is commonly known as biliary or hepatic colic.

The general diagnostic symptoms of gall stones are, primarily, pain which is of an unbearable cutting, tearing, paroxysmal character, seated in the gall bladder region, and radiating to the right shoulder, less often to the left; (2) nausea; (3) vomiting which may persist after the stomach has been emptied and much bile emitted; however, relief may follow paroxysms of vomiting; (4) jaundice, which may be remittent or intermitent; (5) ashen colored stools; (6) high colored urine; (7) presence of a tumor in the region of the gall bladder, after an attack, having the characteristic shape of a distended gall bladder; (8) temperature varies, it may be slight or it may run as high as 103° or 104° ; (9) tenderness over the liver, and (10) nervous phenomena.

Collectively the above symptoms establish the diagnosis, but separately they may be found in other diseases of the biliary apparatus or surrounding viscera.

The conditions from which we most often have to differentiate are: Pleurisy, neuralgia, gastric, intestinal and renal colic, displaced right kidney, and acute appendicitis.

We should have little trouble with pleurisy because of the physical signs. By noting the painful points of neuralgia we can eliminate that. However, we may experience more trouble with gastric colic, and especially that form in which there are spasmodic contractions of the pylorus. Though, if symptoms rapidly follow the taking of cold water, for instance, and other symptoms are prominently gastric in character, you may feel sure that you are dealing with gastric colic.

The seat and character of pain in intestinal colic differ from those biliary colic. Chills and fever more frequently accompany biliary than intestinal or gastric colic.

In renal colic the attack sets in abruptly, without any apparent cause, and is characterized by pain on affected side, extending, as a rule, down and to the groin or thigh, and may be to the labium majus, or testicle, with shortening of cord. Hematuria, which is generally remittent, is present, the blood being mixed with urine and blood cells altered.

To distinguish distended gall bladder from displaced right kidney

requires much skill. Occasionally all the methods laid down, such as movements of the gall bladder by respiration and the relative situation of the colon, etc., are of little value. The shape of the two may be so similar that one almost fails to differentiate, but if by careful manipulation you can separate them a positive diagnosis can be made.

To differentiate between acute appendicitis and biliary colic is sometimes very difficult, and especially where adhesions to the under surface of the bone have been formed after an attack. There is difference, however, in the seat of pain in the primary attack.

We attempt here to present the symptoms of the two in tabulated form to better compare them:

GALL STONE.

1. History of previous attack, followed by jaundice.
2. Sudden onset about 2 or 3 hours after meal.
3. Violent spasmodic pain over hepatic or epigastric region, radiating over right half of thorax.
4. Respiration labored.
5. Feeling of distress in the epigastrium.
6. Nausea and vomiting.
7. Possibly chills and fever.
8. Tenderness over liver, and possibly tumor perceptible in that region.
9. Slow, hard pulse and possibly cold extremities.
10. Jaundice usually follows attack with ashen colored stools and high colored urine.
11. Sudden termination usually.
12. Collapse may follow.

APPENDICITIS.

1. History previous attack. No jaundice.
2. Sudden onset.
3. Pain, which may be agonizing, located in right iliac fossa, or possibly about the umbilicus.
4. Respiration not so labored.
5. Nausea and vomiting in most cases.
6. Pulse usually high.
7. Temperature chart may show but little rise, but may be very high.
8. Anorexia and digestive disorders usually absent.
9. Diarrhea and constipation may alternate or either may persist.
10. Rigidity of right rectus muscle and circumscribed rigidity over appendix in half of the cases.
11. When abscess forms, leucocytosis is present, and circumscribed tumor in right iliac fossa.

In diagnosis of gall stones it is of the greatest importance that we note carefully and accurately the history of the case, and to

observe whether or not the symptoms are hepatic, renal, gastric or intestinal.

The presence of stones in the feces is the crucial test in the diagnosis; however, they may escape observation unless great care be exercised in the examination of the stools. A good method for examining the stool is to make them as fluid as possible by addition of water, then pass through a fine sieve.

TREATMENT—The most urgent demand, especially on part of the patient, is relief. For this purpose administer one pint of hot bicarbonate of soda water and apply hot fomentations over the liver. If no results follow give by mouth one or two teaspoonfuls of chloroform every half hour until 2 or 3 doses are taken; and as last resort use $\frac{1}{4}$ to $\frac{1}{2}$ gr. morphia sulph. and 1/150 atropia sulph. hypodermatically.

Measures should be used to allay gastric irritation if it be present. Give stomach absolute rest, administering, if anything, small bits of ice to allay vomiting. If stomach has been emptied by vomiting may give large doses of bismuth subnitrate, repeated often.

For cold extremities and defective circulation give 1/30 gr. strychn. sulph. by arm and apply external heat. Irrigation of large intestine may be done in the hope that this may excite peristalsis and thus remove or at least aid in the expulsion of plugs of mucous, etc.

I doubt if any medicine given internally tends to dissolve the stone or stones; however, may try the old treatment of giving from 2 to 10 oz. of olive oil. Some claim that while it may not act directly upon the stone it produces a fatty acid and soap that tend to aid in the expulsion of the stone.

If necessary move the bowels by calomel purge followed by salines. As soon as the immediate attack is over (which may be from a few hours to several days or longer) we should attempt to prevent a recurrence. To do this we should allow them to drink the alkaline waters, such as Carlsbad, etc. Have them take plenty exercise, keep up circulation, empty, if possible, the gall bladder occasionally, if it has to be done by calomel, etc.; regulate the diet, not allowing the patient to take any of the starchy or saccharine foods, which tend to render the bile dense, and thereby promote the formation of stones.

DISCUSSION.

DR. MARCOUR: I want to state that I was called in about two o'clock Sunday morning to see a patient suffering with constipation and pain over the gall bladder. After having made the examination I learned that another physician had seen the patient and wanted to withdraw, but the patient insisted that I remain. He was so constipated that I remained all night, trying to evacuate his bowels, but could not do so. He gave a history of repeated pains in the region of McBurney's point. He said that he had been on the point of being operated on in Chicago and other cities. I delayed, much to my sorrow. Finally he permitted me to call in a confrere in consultation. The physician that I called in made a diagnosis of cholecystitis. After a great deal of talk to this patient we convinced him that it was best for him to be operated upon. He was operated upon on December 23 last. Gangrene of the gall bladder was found. I had made a diagnosis of appendicitis, but the true diagnosis was made by the one I called in. The man finally died. I thought I would refer to this case now in connection with this matter of gall stones.

The question was asked of Dr. Nelson how much chloroform would be required to intoxicate a man.

DR. NELSON: I give medicine for the purpose of giving relief, not because the textbook says so much makes a dose.

DR. STORCK: As to the presence of jaundice in gall stone disease, we should not lose sight of the fact that it is manifest (in yellow conjunctiva or skin) in 20 per cent. of cases. In this connection it is well to emphasize the importance of examining the blood serum for bile. I have several times demonstrated the presence of bile in the blood serum when the conjunctiva and skin were entirely free of any discoloration. I have seen a number of cases in which the temperature was normal, but as a rule there is a slight elevation of temperature.

By improved technique good X-ray pictures can be obtained of gall stones, especially when the gall stones contain much calcium or calcium carbonate; stones composed for the most part of cholesterin do not give as good results.

Regarding medical treatment, I have obtained good results with ether and oil of turpentine (Durand's mixture) and olive oil.

I have also used hot Carlsbad water in conjunction with glycocholate and salicylate of soda.

Symptoms should be met as they arise, and the diet should be carefully looked into.

The patient should be encouraged to drink large quantities of water.

Patients who frequently require the use of morphin should be sent to the surgeon, as also all patients who do not improve after a reasonable time under proper medical and hygienic treatment.

Every patient with uncomplicated gall stone disease is entitled to a fair trial with medical treatment.

DR. A. E. FOSSIER read a paper entitled

Raynaud's Disease and its Treatment with Atropin, with Report of a Case.

Raynaud's disease may be defined as a local symmetrical syncope passing into asphyxia and gangrene, affecting the extremities, especially the fingers and toes.

It has been shown to exist as an independent disease. It may follow the infectious diseases, or be associated with hysteria, epilepsy and organic diseases of the nervous system, like locomotor ataxia and syringomyelia. Some authors group with it the gangrene occasionally following diabetes; others again exclude everything, classifying as Raynaud's disease only the independent malady.

Local vascular spasms are the direct causes. Intoxication due to infectious diseases, as erysipelas, syphilis, grip and typhoid fever, as well as morphin and chloral, have produced the disease. Hysteria is a disease characterized by vasomotor disturbances. It is therefore not strange that we should occasionally find this affection caused by tabes dorsalis and syringomyelia and toxins produced in the cause of an infectious disease acting upon the sympathetic ganglia, disturbing the function of the vasomotor apparatus, as is shown by the frequent occurrence of erythemas and urticaria, symptoms of intoxication.

A predisposition in this, as much as in any other disease, is necessary; in other words, the disease can develop only upon a

proper soil. A neuropathic constitution has been reported in many cases, a congenital narrowness of the aorta in others; our case shows such a neuropathic constitution with a history of alcoholism in the father. Females are more subject to it than the males, young adult life up to 30 years of age is most predisposed.

Severe emotions, anger, fright, shock, excessive work and fatigue, cold and trauma have been found to be the chief exciting causes of the affection.

Paresthesia, a sensation as if the fingers or toes were asleep, numbness, tickling and crawling, or intense torturing pains in the affected parts accompany or may long precede the attack. The phalanges become bloodless, cold and waxy, presenting a cadaveric appearance. They have been appropriately described as dead fingers. Pin pricks do not draw blood, the tips of nose and ears are cold.

This syncope may pass on or be followed by cyanosis or gangrene, beginning with blood blisters or blue-black spots upon fingers and toes. Occasionally the blue color may change into red and the affected part again become warm and the disease passes off, or an ulcer may form and heal. If gangrene progresses mummification takes place, a line of demarcation is formed; the dead portion drops, and the stump heals. The process is afebrile, though constitutional symptoms as loss of sleep, appetite, nausea and vomiting, depressions and after psychic disturbances are frequently found.

Sensation is diminished and delayed in the affected phalanges to pain, touch, heat and cold, or to either; mobility is decreased.

Disturbances of the special senses, i. e., sight, hearing, taste and speech (aphasia) have been reported. Albuminuria and hematuria have been found occasionally accompanying the disease.

As a rule the gangrene attacks only a few toes or fingers, but rarely are they all affected at the same time; exceptionally the disease may occur asymmetrical or unilateral. In a few months the patient may entirely recover or relapses may appear one after another for years. The age of the patient, the symmetry of the lesions, the nervous and constitutional symptoms with the exclusions of the vascular and kidney diseases, diabetes and lepra, allowing generally to make a diagnosis. The disease is thought to be an incurable affection, and that treatment cannot influence

its course. Absolute mental and physical rest is especially necessary. The general nutrition must be improved, the diet must be bland and non-irritating. If the patients are financially able, a change of climate will often favorably influence the general condition. Daily repeated tepid bath to the affected extremities to relieve congestion; and warm baths followed by vigorous friction to improve the general circulation, and to tone the system, are always indicated. Light massage and the galvanic current to the spine and sympathetic system is useful. The bowels must be kept freely open, and if the stools are fetid some antiseptic should be used for effect, that is, it has to be given in sufficient doses to remove the odor or allow bismuth to pass unchanged with the stools if administered with the antiseptic. Purin bodies contract arteries. The kidneys have to be watched, and any abnormal feature of the urine be corrected.

Severe pains are best relieved with morphin and chloral, though injections into the affected parts are dangerous. If necessary heart force must be strengthened, and the system toned up with strychnin, digitalis and nitroglycerin.

Finally and by far the most important feature of the treatment is to relax spasms. This can be done with atropin. The drug first contracts, and secondarily relaxes, the arterioles, the skin becomes red and warm. Trials with nitroglycerin have proven failures. The following severe case has been treated by us on these principles, and an immediate change of symptoms followed the administration of this powerful antispasmodic.

Mr. W. N., 24 years of age, was born in New Orleans and has always been a resident of this city. For 5 years he was a motor-man on the electric street railway, but for the last year has worked as a longshoreman, loading and unloading ships. Patient is a moderate smoker and drinker, and claims never to take alcoholics to excess. His father, a confirmed drinker, died when 63 years old of interstitial nephritis.

Mother, sisters and brothers living and in excellent health. He claims not to have had any of the diseases of childhood, but a severe attack of yellow fever in 1898. Sometime in October, 1902, while loading a ship, a piece of iron fell on his left foot, severely bruising the nail of the great toe.

No attention was paid to the injury by the patient at that time, which did not inconvenience him much, though he noticed the coagulated blood under the nail. About a month after an immersion of the foot in hot water caused him intense and continued pain, forcing him to seek the advice of a physician. A treatment with dressing did not give him relief, and the nail was then removed.

However, the pain, almost unbearable now, continued interfering with his general health, causing loss of sleep and weight. About a month and a half after the removal of the nail a tiny black spot was noticed, which grew rapidly to the size of a pea, deep seated and extending downward to the bone. The attending physician was unable to remove the dead tissue with forceps.

Mummification progressed, and in about two months the whole of the first joint was involved. During this time a nail had grown and was removed.

On July 22, 1903, the toe was amputated to the first joint, the flaps were left open and the wound drained. All pains and swelling ceased after the operation, and the wound slowly healed in about nine months. During this time the patient worried a great deal about his condition, often complaining about the slow healing, and a new sore spot had formed between the little and adjoining toe of the right foot, which was first thought by him due to ground itch. The right foot was never bruised. The little speck soon changed to black, and the fourth toe from copper color to ebony. The whole foot was swollen. The wound was treated with moist bichloride dressings, and the excruciating pains relieved with large doses of morphin. Gradually the swelling passed, and in the latter part of October the fourth toe had to be disarticulated and the small toe curetted. The wound was left open and dressed. The patient now went to the Charity Hospital, and the progress of the disease is described by Dr. Jules Lazard, under the title of "Resume of Clinical Lectures" Matas (*Tulane Phagocyte*, April 1904, pp. 137-138), from which the following is taken:

"On November 14, 1903, Dr. Matas saw patient, and advised stay of any surgical proceeding until line of demarcation be fully established, advising the use of powdered charcoal as a deodorant, and soothing poultices to relieve pain; the patient continued to suffer, and could not rest, so on November 21, 1903, I began the

use of ultra-violet rays, which at once gave relief, and for several weeks patient rested well and suffered only occasionally, but finally the violet ray seemed to do no good, and the suffering was as intense as ever. Temperature and pulse always normal. Kidneys and bowels normal. Patient took specific treatment, tonics, salicylates, all to no avail. Patient has never had any venereal disease. (History by Dr. J. I. Richards, 92, through whose courtesy the case was sent to the clinic.)

"Chloroform anesthesia, modified Lisfranc amputation, leaving the great toe and its metatarsal. No sutures were used to approximate the skin edges. The wound was allowed to remain open. All the drainage had ceased a few days later; aseptic Z. O. strips were applied to bring cut skin edges together. At time of discharge wound was healed, and for the first time in many months the foot was painless. * * *"

On April 17, 1904, about 6 months after, we saw the patient for the first time. He was very much emaciated, delirious for the last 36 hours, face expressing anxiety and suffering, urticaria over chest, abdomen and legs. Tip of nose, lobe of ears and extremities cold. Painful hyperemic spots on legs, all toes of right foot except great toe amputated, leaving a large suppurating wound. Great toe cold and blue, with black blood blisters the size of a small bean, the cicatrix of which may yet be seen. Pulse regular, small, tense and arteries straight, but not sclerosed. Chest organs normal, abdomen tympanitic and showing the mentioned wheals of urticaria. Liver and spleen normal. Urine normal, free from albumin and sugar. Fecal matter very fetid.

The patient was treated according to the plan mentioned above. He was put under a milk and vegetable diet. Cold ablutions, followed by vigorous friction morning and night, were given. The bowels emptied. Sulphocarbolate of soda and zinc to correct fetor. Strychnin, nitroglycerin and digitalis to strengthen the heart force; and atropin in full doses to relax the vascular spasms.

April 20, marked improvement, sensorium free, and patient hopeful instead of the constant mental depression and occasional delirium. Color of toe changed from deep blue-black to red, warmer, and covered with shedding of dried skin. Pain relieved.

April 22, improvement continues, patient feels comfortable and

entirely free from pain. Urticaria entirely disappeared. Wound healing.

April 24, patient walks about with crutches, wound healing rapidly, toe nail dropped off.

April 27, patient in excellent condition, appetite has returned and patient is gaining in weight, countenance bright and hopeful.

Five months after the patient was seen by us. He is back at his severe laborious work. A short while after his great toe of the left foot was severely bruised by a heavy board falling upon it, the wound healed rapidly and the patient is now, as you see him, in perfect health.

Studying the foregoing history of this severe case of undoubted Raynaud's disease, we cannot but believe that the administration of atropin has caused the favorable change that appeared almost immediately following its administration after two years of constant progress and suffering. This valuable drug should be tried in all cases of this intractable malady.

DISCUSSION.

DR. KELLY: I would like to report a case that occurred some years ago in a child of fourteen years of age. It was in the month of July or August, and we had had a hot wave. Each arm was affected alike from the elbow to the wrist; the legs were affected from the knees down. He followed a course something like this patient. After about six months the boy recovered, losing all the toes on his right foot and about half of the toes on his left. I think this was one of the severest cases I have ever seen. The patient was somewhat purple, and then went right on into gangrene, which sloughed off clear through to the bone. I saw another case in which the surgeon amputated both legs, for the reason, he said, that in gangrene it should be amputated in toto. I think it is best to watch for a line of demarcation to be drawn. The boy in the case I report is now well.

DR. LAZARD: I saw that case that Dr. Fossier reports. The report is to be found in the *Phagocyte*. I want to speak of the case of a young man about thirty years of age. An interesting particular of this case was the fact that his father, mother, brother and only sister died of tuberculosis. He had his toe nails

pared, and thinks that was the beginning of the trouble. I do not think that that had anything to do with it. He was affected in first one toe, then another, and then in the foot up to the ankle. His foot had the appearance of having on a sock. It was necessary to amputate the foot to relieve the pain. In about fourteen months the same condition developed in the other leg in the same order. He died after the second amputation, which was done for the relief of intense suffering of Raynaud's disease.

Orleans Parish Medical Society Proceedings.

President, DR. C. JEFF. MILLER.

Secretary, DR. AMEDEE GRANGER.

141 Elk Place, New Orleans.

In Charge of the Publication Committee, DR. AMEDEE GRANGER, Chairman,
DRS. GEO. S. BEL and E. H. WALET.

MEETING OF NOVEMBER 10, 1906.

DR. W. T. RICHARDS read a paper entitled "*Preliminary Report of Cases of Ununited Fracture, Treated by the Bier Blood Injection.*" (Paper not furnished to Publication Committee.)

DISCUSSION.—DR. MCILHENNY saw at Bier's Clinic results obtained by the hyperemia method which were identical with those reported by the essayist from the use of the Bier blood injection. He does not think that spiculae of bone would cause failure from the use of the blood injection. If the method of injection, which stimulates just as hyperemia does, is continued long enough, these spiculae should be absorbed.

Lister used the pounding method to obtain the same results; the Bier injection method should act more rapidly and be devoid of external traumatism, risk of infection and pain.

DR. HATCH asked the reader if he had any pictures of the cases from treatment was instituted. He did not believe that from the skiagraph shown one could say without the clinical symptoms whether or not there was union.

DR. GRANGER took issue with Dr. Hatch on the last point. He said that a good skiagraph should show a different shadow in the case of a callous with non-union, and in cases of callous with good functional results.

DR. PERKINS was very much interested in the results obtained and would like to try the method on a suitable case. He intends to treat by that means the next case which comes under his attention. He has tried various manipulative methods with a view to produce hyperemia, with varying success. Recently he discharged cured a man whose humerus had remained ununited, except by fibrous tissue, for over six months, in spite of prolonged treatment in plaster casts. The method used was drilling oblique holes from one fragment through the intervening fibrous union into the other fragment, with the idea of inducing osteogenetic activity along these holes so as to form bone pegs, as well as to induce general osseous formation in the whole fibrous mass.

DR. ALLEN saw the results in nearly all the cases reported by the essayist. With but one exception good results were obtained in every case. In that one case he believes that the failure was due to the presence of spiculae of bones, which later gave rise to some trouble, the formation of a sinus and their subsequent removal.

DR. RICHARDS, in closing, said that he would report further to the Society on this subject, which is of very great interest to him. He would attempt in the future to have skiagraphs of all the cases taken before employing the method, and follow this by subsequent skiagraphs, taken at regular intervals.

Communications.

Pure Food.

Editors of the Medical and Surgical Journal.—I have perused numerous articles on the Pure Food question and the evil effects of coloring matter and preservatives on the human system, but not until recently, however have I perused articles written by physicians who claim that boric acid and boron compounds, which are used quite extensively for preserving food, are the cause of appendicitis.

An article appeared in the *New York Medical Journal*, April 17, 1906, and in the *Truth*, of Buffalo, N. Y., June 30, 1906, stating that boric acid was the cause of appendicitis.

If such statements were true, however, the English nation would be wiped out of existence. They have consumed foods preserved with borax for decades, and if food preserved with boron compounds was dangerous to health, the entire medical fraternity would have learned of it years ago.

I have had a great deal of experience with boric acid and have always found it a soothing, cooling, healing sedative agent. The action of boric acid on the cuticle and mucus membrane is to allay inflammation, not to cause it. It is recognized as the most innocent antiseptic extant.

It is an antiseptic which never irritates nor inflames, and thus enables a natural healing process to take place without interruption. Its action on the organic tissues is seen by the blood. Concentrated boric acid mixed thoroughly with fresh blood only delays and cannot prevent coagulation.

In spite of all that has been said against boric acid, it is clear that its action on albuminous bodies has no analogy with any other acid except carbonic acid gas. It has been stated that weak or diseased kidneys could not eliminate boric acid. It is a fact, however, that it forms remedies of great value in kidney diseases. If the vermiform appendix were inflamed, boric acid would have a tendency to allay the inflammation instead of exciting it. Solutions of boric acid have been used in every cavity of the human system with beneficial instead of detrimental results.

That cases of appendicitis are more numerous now than they were years ago cannot be denied. Years ago, however, such cases were diagnosed differently. In the census year of 1890, there are no records of any appendicitis cases. In 1900 there were five thousand and one hundred and eleven cases.

There is no doubt that a few cases are caused by foreign bodies entering the appendix. Coprolites are found much more frequently, however, than foreign bodies.

Bryant, in his paper published in the *Annals of Surgery*, Feb. 1903, states: "I found in one hundred and twenty-four cases, abnormal matter in 70 per cent of the males and 55 per cent of the females." Renvers, in the *Deutsche Medicinische Wochenschrift*,

1891, found in four hundred and fifty-nine autopsies, one hundred and seventy-nine coprolites and about sixteen foreign bodies.

• We do not as yet understand the functions of the appendix. Without doubt almost every case of inflammation in the iliac region can be traced to a diseased appendix. Fecal matter is forced into the appendix which is so constructed that it cannot drain itself, which causes inflammation. The vermiform appendix being a weak organ, is unable to protect itself.

Constipation would have a tendency to interfere with the supply of blood by direct pressure on the single artery which supplies the blood.

A great many cases can, no doubt, be attributed to our bad habits of eating too much and masticating our food too little, which causes dyspepsia, constipation and general derangement of the functions. The hurrying restless lives we lead certainly interferes with the normal working of our digestive organs.

I firmly believe that indigestion, constipation, diarrhea and other digestive disturbances are the prime factors which favor the development of appendicitis. Yours very truly,

(Signed) H. H. LANGDON,
New York City.

A Correction.

To the Editors—In the paper of Mr. J. C. Smith published in the last number of the Journal (Dec., 1906, page 422), there occurs a slight error in the dates of corroborative evidence of Major Reed's famous discovery of yellow fever transmission.

To my best knowledge and belief the first corroborative evidence of the findings in Havana by Reed, Carroll, Lazear and Agramonte, of the U. S. Army Commission, and Dr. Julian Guiteras, of Havana, was obtained by Working Parties Nos. 1 and 2, of the U. S. Public Health and Marine Hospital Service. These experiments were made in Vera Cruz in midsummer, 1902 and 1903, and to them, therefore, belongs the credit of priority for corroboration. Very truly yours,

GEO. E. BEYER.

N. O. Medical and Surgical Journal

Editorial Department.

CHAS. CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

A New Year Retrospect.

The advance in medical science from year to year is marked with radical changes, even in the basic philosophy of its divisions. It is now over twenty years since the profession was openly divided on the question of the germ theory in disease. The one side looked upon this theory as the solution of the etiology of all obscure diseases, while the other declared against so foolish an explanation of so radical morbid conditions of the human economy.

The review of medicine since the time of the early Roman teachers, through the successive periods of the Dutch and Spanish masters down to the modern schools of this and European countries, shows that for more than thirty centuries progress was slow, and that in both fields of surgery and medicine any radical advance was accepted with skepticism, or worse.

It has been interesting to see the charlatanic methods of Mesmer followed and accepted by the teachings of Charcot, Bernheim, Moll, and others who have exploited hypnotic studies. These in turn have opened up certain fields of psychic medicine, early looked upon as within the province of the astrologer and occultist, now all occupying definite position in the broad field of modern medicine.

Bastian, who lived until a few years since, died long after his theory of spontaneous generation, as applied to germs and disease, had been buried.

The modern laboratory, whether for bacteriologic research or for the investigation of pathology, accepts, without any intermediary reasoning, the broad facts which Pasteur, Lister, Koch, Virchow, Behring, Roux, and, finally, Metchnikoff have taught. The vanguard made up of these illustrious lights and their kind has left

so broad a way that even the passive student of medicine, reading the work of those who have done the labor, has no difficulty in appreciating the modern theories of disease. By means of the test tube and microscope, remote organs are brought to light, and the examination of the blood points now to the actual record of Nature's fight against disease.

Sera have been evolved which have proven theories, and some of these even anticipate and prevent infection.

But, after all, the intelligence of the modern medical teachers and workers has appreciated the limitations of theories, and now the new one must be proven before it is adopted for practice. From Japan to the Southern tip of Africa, and from Brazil across the Seas to the wilds of India, there are men qualified to demonstrate or refute results claimed by those who promote new ideas.

With each new year the medical profession realizes its advance to a higher plane and the divisions of its growing field make the study harder as it makes it the more interesting. Periods have been marked as epochal with the names of Hunter, Jenner and Pasteur in the last century, and in the new the names of others stand out as prominently. But we may forecast another period of advance, and when the present generation has grown into old age the record of achievement will be as boldly written as all those gone before.

The Medical Class of Tulane.

Under this caption we published in our number of December, 1902, the following editorial:

"Up to November 25, the number of matriculates in the Medical Department of Tulane University was 392; as students usually continue coming in until the end of the year, it is fair to estimate that the class of 1902-3 will number over four hundred, or nearly as many as that of last year, which was one of the largest in the history of the department.

"We are doubly pleased at this showing: it is an evidence of success which must prove gratifying to all the friends of the University, and, what is to us of great significance, it is prosperity in the face of increased requirements for admission and for graduation.

"It had been feared by the respected Dean that quite a falling off would follow the establishment of the four years' course, but it is evident that if there is any it will be quite slight, and, in our opinion, only for a short time.

"We firmly believe that every progressive stride made by the college will increase not only its reputation but its revenue. We are fully convinced that even for financial results alone it should be the aim of Tulane

not only to remain the best medical college in the South, but to become the peer of any in any country.

"New Orleans is already a large medical center. It possesses one of the largest and best hospitals in the United States. With increased commerce and larger population its advantages can only become greater. Once its college is on a par with the best, the mildness of its climate is bound to attract many from our colder latitudes, and its location is sure to bring others from those to the south of us.

"An evidence of these possibilities is furnished by the post-graduate school here, the Polyclinic, which has already enrolled matriculates from as far north as New York, as far west as Minnesota, and from Mexico, although its rates are higher than those of many competitors.

"We predict that, with the continuance of a progressive policy, within *five* years the medical class of Tulane will reach *five hundred*."

We merely wish to add that at present writing, four years since the above was published, the medical class numbers 519, conclusive evidence that our prophecy was correct and that it was based upon correct reasoning. We further believe that, in addition to increased requirements for admission and for graduation, Tulane must furnish increased facilities in the way of more and better equipped laboratories, a larger number of full professorships and many more associate or assistant professors and instructors. Tulane University has the opportunity and the means of possessing one of the best medical departments, both undergraduate and post-graduate, in the world, and we believe that the Board of Administrators and the President of the University have the wisdom and energy to make the best of this opportunity.

Mims' Culicide.

We have been much interested in the results of the experiments in practical culicidal fumigation as practiced by the Board of Health of the Isthmian Canal Commission and reported in Bulletin No. 2, by Arthur I. Kendall, Acting Chief of Laboratory. He describes at length the experiments made with sulphur, with pyrethrum and with the Mims' campho-phenique mixture. It is pleasing to note that the campho-phenique when used properly seems to have given the greatest satisfaction and Mr. Kendall concludes that in well-constructed houses it is a cheap, efficient and non-objectionable culicide, possessing, particularly when combined with formaldehyde, good bacterial properties as well.

All three culicides were found to have a certain effect on fruits,

although the campho-phenique was less injurious than either of the others. Another conclusion is that the Mims' mixture is also the cheapest fumigant of the three when all points of comparison are considered.

Our New Orleans chemist is to be congratulated on having hit upon an agent of the greatest value for use in the destruction of one of our worst enemies.

The Stegomyia Now in New Orleans.

Speaking of mosquitoes, New Orleans has been afflicted with a particularly pestiferous lot during the late extraordinary hot days, and among the mosquitoes noted there were many stegomyia. It is now time to exterminate these, and to rid the city of their breeding places. The Board of Health of New Orleans has repeatedly urged the examination of cisterns and their screening, and the profession should both warn and advise the laity that much can be done now. By carefully correcting defects in screening, removing all breeding places, stagnant water, and by systematically fumigating the stegomyia can and should be done away with before the summer comes.

Abstracts, Extracts and Miscellany.

Department of Surgery.

In Charge of DR. F. W. PARHAM, Assisted by DR. F. LARUE, New Orleans.

CLINICAL AND EXPERIMENTAL EXPERIENCE WITH COLLOIDAL SILVER.—Vale, in *American Journal of Medical Sciences* for November, relates his experience with colloidal silver in one virulent case of streptococcic infection, in which he gives the silver credit for the final cure, though to us there appears to be some question of the justice of this claim. This case stimulated him to undertake a few experiments on rabbits, with a view to obtaining further

impressions as to its value and limitations in preventing infection by the streptococcus.

Twenty rabbits were inoculated twenty-four hours after the injection of varying amounts of colloidal silver, when the leucocytosis was at its height. The leucocytosis, by the way, bore no relation in degree to the amount of colloidal silver injected. The silver was administered in some instances subcutaneously, in some intravenously, and in some into the peritoneal cavity.

The results are rather disappointing to those who believe in the antitoxic effects of certain substances introduced into the blood. Vale states that in no instance was a local reaction from the subcutaneous inoculation of the streptococcus entirely prevented; indeed, in some instances, there was a strong impression received that the smaller doses actually diminished the animals' resisting powers. All the controls lived, while two rabbits, receiving small doses of colloidal silver and inoculated twenty-four hours later with the streptococcus, died. He concludes:

"Of course, these experiments do not permit of any broad generalizations, but taken in connection with those of Brunner, Trommsdorf and Cohn, they at least suggest—in spite of the well-demonstrated value of colloidal silver against infection once established—that in doses heretofore advocated, no confidence can be placed in its ability to prevent infection; and they further suggest these small doses may even lessen the patient's resisting powers, whether used intravenously, in the peritoneal cavity, or subcutaneously, and actually be an added source of danger."

We believe these observations of Vale's have hurt and not helped the cause of colloidal silver, so stoutly championed by Crede, its originator.

THE ELIMINATION OF BONE CAVITIES BY BONE-PLUGGING MATERIAL—The publication in the November number of *Surgery, Gynecology and Obstetrics* of an article on the filling of bone defects by Von Mosetig-Moorhof himself, the distinguished originator of the method, will do much to popularize this great advance in bone surgery. The article is accompanied by a photograph of this celebrated Vienna surgeon.

The filling mixture now employed by Von Mosetig-Moorhof is prepared as follows: With strict asepsis of materials, vessels and

hands, equal parts of spermaceti and oil of sesame are melted in an evaporating dish, filtered into a florentine flask and sterilized in a water-bath; forty parts of powdered (not crystallized) iodoform are put into a sterile flask and to this sixty parts of the hot mixture are poured in and the mixture constantly agitated until it solidifies. The melting point of the mass is between 45° and 48° C. (113° to $118 \frac{2}{5}^{\circ}$ Fah.). Danger of decomposition of the iodoform enjoins against exposure to a higher temperature than 55° C. (131° Fah.).

When the bone cavity has been prepared the mixture is poured in and allowed to harden, which it will do in a few minutes. When possible the wound is closed completely, leaving only a small opening for drainage.

The essentials for success are complete removal of diseased bone, thorough disinfection of the cavity, and hemostasis. When carried out strictly according to the directions of the originator, the method has a wide application, and will shorten materially the duration of healing and give greatly improved results.

The author has employed it in over a thousand cases with hardly a failure to accomplish the end in view, the rapid healing of bone defects with vastly improved functional result.

Department of Obstetrics and Gynecology.

In Charge of DR. P. MICHINARD and DR. C. J. MILLER, New Orleans.

VAGINAL DRAINAGE IN CHILDREN AND YOUNG ADULTS—In the *Medical Chronicle* for May, A. W. W. Lea calls attention to the efficiency of this route in draining the pelvis of young children, and states that it is seldom used except in adults. Kelly, for example, in illustrating a case of abscess bulging into the pouch of Douglas in a girl of ten years of age, says, "Vaginal drainage impossible, owing to age of patient." For some years Lea has employed vaginal drainage in children whenever it has been necessary to drain the pouch of Douglas, and the results have been satisfactory in every case. In some cases abdomino-vaginal drain-

age was used, in others vaginal alone. His cases number 12, the ages being 5 to 14 years, the affections being acute appendicitis and tuberculous peritonitis. The writer believes that vaginal drainage should be employed in all cases of diffuse peritonitis in children, for localized pelvic abscess if it can be felt bulging in the pelvic floor, and may be of value in tuberculous peritonitis. The vagina of even a young child can be readily dilated to admit the finger, often without any abrasion or laceration of the parts. If abdominal drainage is also to be established, the tube may be drawn through from above. A piece of silk may be attached to the vaginal tube to permit of its withdrawal when necessary. The presence of the tube in the vagina causes no discomfort, and is well borne by even young children.

VAGINAL FIXATION AND CESAREAN SECTION—Westphal has observed a number of births after the performance of these operations, and concludes that the scar left after vaginal Cesarean section, even if it does not bear primarily, does not necessarily become pathological. He regards the prognosis, therefore, after the operation as good as far as it affects future deliveries. The scar does not seem to be a cause of dystocia in later births. He holds the same views as to vaginal fixation of the uterus, noting only that well tried methods should be employed, and advocates, seemingly, vaginal shortening of the round ligaments and vesico-uterine fixation.—(*Muencher Mediz. Woeh.*)—*New York Med. Jour.*

DILATATION VERSUS INCISION OF THE GRAVID UTERUS—Dr. Egbert Granduc (Transaction Amer. Gynec. Society) considered this subject from the standpoint of the elective operation as well as from the viewpoint of the emergency operation. Incision should never be resorted to when the complication calling for intervention justified delay. Thus, in induction of labor in a case of pelvic contraction, interference in many cases of impending toxemia, as also in most instances of placenta previa, calling for dilatation. On the other hand, the acute toxemias, the urgent instances of placenta previa called for incision. The operative methods to be considered were abdominal and vaginal incision and manual and instrumental dilatation. Broadly speaking, in pelvis contraction, when it was doubtful that dilatation, or vaginal incision, would permit of delivery, abdominal incision was called for. In acute

toxemia, where the true element entered as a factor, and in acute cases of placenta previa, vaginal incision was justifiable, else dilatation should be the rule after a prescribed technic.

HETEROPLASTIC OVARIAN GRAFTING—*The Medical Record* (May 5, 1906) contains a report of a case of a woman 21 years old, from whom Robt. T. Morris removed both ovaries completely, for cirrhotic ovaritis.

Just prior to this operation he removed a wedge-shaped ribbon of normal ovarian tissue from a patient being operated upon by Dr. H. J. Boedt, for uterine prolapse. The above mentioned ovarian tissue was put in saline solution at a temperature of 100° F., and kept at this temperature until the above mentioned ovariectomy was completed. Then a slit was made through the peritoneum of the broad ligament on either side, parallel with the oviduct. In each slit was placed a segment of the ovarian structure obtained from Dr. Boldt's patient. These grafts were secured by a single stitch. The patient made an uneventful recovery, and four months later menstruated for the first time in over two years. Four years later she was delivered of a normal child.

Dr. Morris took great care in removing the cirrhotic ovaries, and used Tuffier's angiotribe so as to be sure that no ovarian tissue remained. He believes this to be a well defined case of heteroplastic ovarian grafting, followed by menstruation and pregnancy.

Department of Internal Medicine.

In Charge of DR. E. M. DUPAQUIER, New Orleans.

PLEURISY WITH EFFUSION IN CHILDREN—There is a set of cases in which the course of the disease is insidious. The patient, at the onset, has had for two or three days a febrile movement which has subsided, leaving the child not quite well, and with a slight febrile movement towards evening, a slight hacking cough and some little pain in the chest, on exertion. Languor and loss of strength are progressive. There may be exhausting sweats at night. Examination of the chest will reveal an effusion.

In some of the cases the effusion becomes apparent on the eighth

day; in others a purulent effusion is found in the chest on the twelfth or fourteenth day of the disease. The effusion which finally becomes apparent in the chest has been coincident in its onset with a pneumonia—there has been a pleuropneumonia. The process in the lung, however, takes a secondary place in the clinical picture when the effusion in the pleural cavity has accumulated.—(Koplik's Diseases of Infancy and Childhood.)

Hyperemia in Practical Treatment—For practical curative purposes artificial congestion has been sought and applied, long time ago; but improvements in the *modus operandi* are recent and due to Bier, Klapp, Ratenberg and others. (Hot air, rubber bandage, vacuum cylinders.)

Heat Process—Formerly, the use of hot applications of sand, wet compresses, hardly above 45° C., produced but a slight hyperemia. To-day, contrivances for hot air treatment generate a temperature of 100° C., and even 130° C. Perspiration reaches its maximum at 60°, congestion at 80°; it is unnecessary to reach above 100°. Results are better and risks are small if care be taken to increase the temperature slowly exposing limited areas at a time and for never more than half an hour at a sitting, avoiding the escape of the hot air at the point of entrance of the part treated in the apparatus, otherwise severe burns or some catalestial disturbances, headache, palpitations, fainting may occur.

Indications—Chronic affections, in particular the so-called chronic rheumatism; neuralgia; arthritis, barring the tubercular; yet, the stiffness and fibrous ankylosis following tubercular arthritis are indications. (Bier.)

Rubber Bandage—Artificial stasis, venous hyperemia, is obtained by applying and re-applying a rubber bandage, far enough above the part treated to include healthy tissues in the hyperemic region. The constricting band is applied over a coat of cotton or turns of flannel bandage, since an acute metastatic abscess may form on the site of application. The degree of constriction must be sufficient to distend the superficial veins and swell the parts, which take a bluish hue. Drawn too tight the band causes arterial pulsations, petechiae, painful formication, lowering of the temperature, possibly anemia of the skin, which takes a yellowish hue. Properly applied, the temperature of the part remaining normal, the pulse very perceptible, it can be borne for hours.

Three hours a day are a sufficient time. The resulting edema is met by elevation or by immersing in a mercury bath the edematous parts during twenty minutes, not continuously, but with one minute pause every four minutes.

Indications—As a rule it were better not to treat, that way, suppurating affections. The special and main indications are local tuberculosis, tubercular arthritis. In pus cases small incisions are made, pus expressed out, and a flat dressing applied. It takes months to bring about a lasting improvement. Of course, cases that are too far gone, with extended and advanced necrosis, can not be expected to improve at all.

Streptococcic and gonorrheal arthritis, inflammation of tendons and synovials, osteomyelitis, bone felons, lymphangitis, phlegmons. Inflammations of the head, the band being placed round the neck, and drawn according to individual susceptibility, otitis media, parotiditis, adenitis, nose and jaw affections. Inflammations of the testicles, the band being drawn at the root of the scrotum.

Vacuum Cylinders—Klapp's devices. Rarefied air. Recalling the old cups and particularly the old brass cylinder with manometer and pump of Junod (la botte de Junod). Action is more intensive than with the rubber bandage. Active revulsion, hyperemia. Parts swell, hairs stand, one-third atmosphere, prolonged causes, punctuated hemorrhages, formications.

Indications—Suppurating affections, open wounds. Especially suppurating mammitis. Make incision, smear vaseline around it, apply large glass cup or globe to fit with a pump attached, and rarefy the air slowly during five minutes. Make ten such applications a day. Results are, so they say, wonderful.

Finally, other indications are suppurating adenitis, furuncles, carbuncles, bone felons.

Action of Artificial Stasis—1st. It relieves pain. 2d. It increases the bacteriolytic power of the blood and other tissues. Transudates of inflammatory edema is bactericide (Noetgel). Blood serum following stasis is equally bactericide (Laqueur). Bacteriolysis is due to increased amount of CO in the blood (Amburger), to increased phagocytosis (Von Leyden), to accumulated catabolic products (Heller). 3d. Venous hyperemia acts on diseased and necrotic tissues by proteolytic power due to the increased

number of leucocytes. Necrotic parts soften rapidly and slough off easily, chiefly in articular affections; nodes, blood clots, fibrous adhesions, etc, dissolve quite promptly. Stasis, indeed, has a solvent power. Application of the rubber bandage will give the stiff and ankylosed joint its former mobility and suppleness (Bier).
4th. Venous stasis helps resorption of toxins and morbid exudates.
5th. Abundant transudation following stasis assists defense of tissues, against pathogenic elements. It dilutes toxins, makes them less harmful. Stasic edema decreases toxicity of a number of poisons (Joseph).

Conclusion—Beware of keeping the rubber bandage too long; in the groin and axilla it may prove dangerous. Beware of the appearance of inflammatory erythema, something like erysipelas. Do not use hyperemia in arteriosclerotic or varicose subjects.—*Gazette des Hopitaux*.

Department of Therapeutics and Pharmacology.

In Charge of DR. J. A. STORCK and DR. J. T. HALSEY, New Orleans.

PAINLESS MERCURY INJECTIONS—(MAYER) *Deutsche Med. Woch.* (Oct. 11, 1906) reports from Prof. Lassar's clinic an experience with 900 injections of a combination of mercuric cyanide, acoin and boric acid. Fifteen times (1.6%) severe pain was complained of. Forty-three times (4.7%) uncomfortable sensations were caused. All other injections are stated to have caused no discomfort. No other undesirable results ensued. The author believes this new solution to be a distinct improvement on all others which he has used. Following is the formula:

- I. Hydrargyri cyanidigm 1.0
Dissolve with gentle heat in
Aq. Dest. containing Ac. Boric 1%..... 30.00
- II. Acoini (Von Heyden) 0.4
Dissolve in
Aq. Dest. containing Ac. Boric 1%..... 70.00
- M. Dispense in opaque bottle.
Sig. 1 or 2 c. c. m as injection.
- J. T. H.

FOR GONORRHEAL RHEUMATISM.

℞.

Acidi salicylici	3i.
Mentholis	gr. xv.
Guaiacolis	3ss.
Alcoholis	f3i.

M. et ft. mist.

Sig.—To be painted over the affected areas, and the parts covered with cotton and oil silk.—*Merck's Archives*.

PILLS FOR ANEMIA.

℞.

Ferri et sodii pyrophosph.....	3ss.
Extracti rhei	gr. xlv.
Extracti aloes	gr. viii.
Extracti taraxaci	q.s.

M. ft. pil. Z.

Sig.—Two (2) to be taken night and morning.—(Bamberger.)

MIXTURE FOR CHLOROSIS.

℞.

Ferri sulphatis	gr. xxiv.
Magnesii sulphatis	3vi.
Acidi sulphurici aromatici	mxl.
Tincturae zingiberis	3i.
Infusi gentianae compositi ad.....	3viii.

M. f. mist.

Sig.—A sixth part twice a day.—(Sir A. Clark.)

PILLS FOR ARTERIO-SCLEROSIS WITH FEEBLE HEART.

℞.

Sodii iodidi	3i.
Sparteinae sulphatis	gr. xv.
Pulveris glycyrrhizae	q. s.

Wt. f. pil. No. xl.

Sig.—Four (4) to six (6) daily. (To be kept in a dry place.)—(Huchard.)

OXYURIS VERMICULARIS.

Excellent results have been said to be obtained by enemata of naphthaline (15 to 20 grains) in olive oil (1½ to 2 ounces) in

young children. Larger doses must be employed for adults, and in this case a turpentine enema, one dram to a pint of soap and water, is very useful.—(I. Burney Yeo.)

FOR CHRONIC DIARRHEA.

R.

Cupri sulphatis gr.ii.
 Pulveris cinnamoni gr.xii.
 Pulveris opii gr. iiss.
 Mucilaginis q. s.

M. fiat duodecimi.

Sig.—One (1) pill, which may increased to two (2), to be taken three (3) times a day.—(I. Burney Yeo.)

FOR CHRONIC CONSTIPATION.

R.

Pulveris rhei —
 Extracti rhamni purshianae..... àà gr. xxiv.
 Extracti euonymi gr. xii.
 Extracti physostigmatis —
 Extracti belladonnae àà gr. iv.

Ft. pilulae No. xxiv.

Sig.—One (1) pill at bedtime.—(A. A. Stevens.)

J. A. S.

Department of Nervous and Mental Diseases.

In charge of Dr. P. E. Archinard and Dr. Roy M. Van Wart, New Orleans.

THE CEREBRAL ELEMENT IN THE REFLEXES.—Walton and Paul (*Journal of Nervous and Mental Diseases*, Nov., 1906.), conclude from their studies of the mechanism of the reflexes that “the deep reflex is a resultant of the activity of cerebral and spinal arcs, the longer arcs tending to produce a deliberate and moderate reflex, the shorter arcs an active and violent reflex.

The deep reflex varies in healthy individuals, and in the nemo-psychoses according to the predominant influence of the longer or shorter arcs.

In disease of organic origin the partial withdrawal of the higher influence causes the spinal type of deep reflex, but the complete withdrawal of the higher influence causes abolition of the deep reflexes, since the spinal arc alone is incapable (in man) of sustaining the burden.

Upon re-establishment of the higher influence the reflexes return, the spinal type predominating if the re-establishment is partial, the normal type if it is complete.

Initial lessening or loss of deep reflex in the paralyzed parts is the rule in apoplexy. This condition persists for a period varying from half an hour to a number of days, after which these reflexes become normal or assume the spinal (exaggerated) type, according as the return of cerebral influence has been complete or partial.

In the exceptional cases of apoplexy with initial exaggeration of deep reflexes the withdrawal of cerebral influence has been from the first incomplete.

The superficial reflexes, like the deep, have a cerebral control, and disappear on withdrawal of that control. The fact that they do not become exaggerated in disease of the pyramidal tract shows that they have little if any spinal representation.

The control of the Babinski reflex more nearly approximates that of the deep than that of the superficial.

Prince and Munro, the same journal, report a case of *Brain Tumor* in which the principal symptoms were "a circumscribed limited area of anaesthesia; marked muscular atrophy appearing early; epileptiform attacks of hemialgesia of a peculiar nature; loss of the muscular sense, astereognosis, ataxia and paresis increasing to ultimate paralysis. The patient, a girl, age 19, was first seen in Nov., 1902. She had been well to within about one year, when she had attacks of pain in the right shoulder which yielded to treatment. Six months later this returned and she had suffered from recurrences since. These attacks commenced in the fingers of the right hand and radiated until the whole left side was involved. There was a history of clonic spasm in the right arm. There was some disturbance of consciousness, but it was not completely lost. She has had headaches and dizziness. There had been no vomiting. The wasting of the shoulder muscles came on in May, 1902. The examination showed the presence of a double optic neuritis in

addition to the symptoms already mentioned. The patient left the hospital and was not seen again for three months. An operation was then advised in the hope of relief. This was performed in two stages, owing to the weak condition of the patient, who died on the 18th day from secondary infection. The tumor proved to be an endothelioma. No autopsy was obtained, but the operation showed the localization in the post-central convolution, primarily, to have been correct.

Miscellany.

Leprosy in the Philippines.

The presence of leprosy in the Philippine Islands has afforded a problem of serious importance to the governing authorities for more than two hundred years. Soon after the establishment of civil government the Philippine Commission set aside an island as a home for the unfortunate sufferers from this dread disease where they could be provided with comfortable homes and their lives made relatively pleasant. Preparations were begun some years ago for the transfer of these people, but it was not until the quarter covered by this report that the project had advanced far enough to permit the work of segregation to be begun. Heretofore it has been the practice and policy, especially in the provinces, to admit to the leper hospital only such patients as were unable to earn their own living and had no one to provide for them, thus many who had not become public charges were left undisturbed, which was the opportunity for the indefinite spread of the infection.

The present policy is to transfer to the colony all the lepers from those islands which occupy an isolated position, and at the same time contain but few leprous patients, so as to remove the source of danger from the largest amount of territory possible in the shortest space of time, thus aiming to eliminate the infection from a large area, so as to enable the Bureau to concentrate its efforts more effectually at those points at which the disease is more easily spread.

For the purpose of economy and more efficient administration it was decided to reduce the number of leper hospitals, and in pur-

suance of this policy the institution at Cebu was closed and its inmates, 365 in number, were the first lepers transferred to the new colony at Culion.

A few days before the close of the quarter the Coast Guard cutter, *Polillo*, was dispatched to the Islands of Masbate, Romblon, Mindoro, Siquijor, Negros, Cuyo, and Palawan for the purpose of removing the lepers from these islands to the Culion colony, which will bring the total number of colonized lepers up to approximately 500.

The momentous and far-reaching work of eradicating this loathsome disease from the Philippine Islands has been actually begun, but the ultimate success of the undertaking depends on the faithful pursuance of the policy which has been inaugurated.—(Quarterly Report of Bureau of Health for the Philippine Islands, Second Quarter, 1906.)

Louisiana State Medical Society Notes.

In Charge of DR. P. L. THIBAUT, Secretary, 141 Elk Place.

NEXT MEETING: NEW ORLEANS, MAY 14, 15, 16, 1907.

OFFICERS—President, Dr. Henry Dickson Bruns, New Orleans; First Vice-President, Dr. Charles McVea, Baton Rouge; Second Vice-President, Dr. George F. Wilson, Bienville; Third Vice-President, Dr. A. J. Perkins, Lake Charles; Secretary, Dr. P. L. Thibaut, New Orleans; Treasurer, Dr. Jules Lazard, 830 Canal Street, New Orleans.

COUNCILLORS—Chairman, Dr. E. J. Graner, 2d Cong. Dist., New Orleans; Secretary, Dr. J. L. Scales, 4th Cong. Dist., Alden Bridge, La.; Dr. P. E. Archinard, 1st Cong. Dist., New Orleans; Dr. J. Wofford Sanders, 3d Cong. Dist., New Iberia, La.; Dr. S. L. White, 5th Cong. Dist., Ruston, La.; Dr. C. M. Sitman, 6th Cong. Dist., Greensburg, La.; Dr. C. A. Gardiner, 7th Cong. Dist., Sunset, La.

MINUTES OF 1906 MEETING (Concluded).

INSTALLATION OF OFFICERS.

The President appointed Dr. McGehee and Dr. Dyer as a Committee to escort the new officers to the chair.

The Committee presented Dr. H. D. Bruns, President.

DR. DUCOTE: Dr. Bruns, our new President. He needs no introduction at my hands. As long as I have been a member of this Society I have been a constant attendant and do not remember

being here without seeing him on the floor doing good work. I am sure the Society did not commit an error in electing him President. I know that he deserves it and will make a most excellent officer.

DR. BRUNS: Gentlemen of the Society, it seems to me that the session has been so prolonged and we are so worn out that it is not a good time to make a speech, but at the banquet tonight I will try to make same sort of an acknowledgment of the honor which I highly appreciate.

The Committee presented DR. CHAS. McVEA, First Vice-President.

DR. McVEA: Gentlemen, Dr. Bruns will do the speaking for both of us tonight. I am here to assist him and we will do our best. I thank you for the honor which you have conferred upon me.

DR. GEO. F. WILSON, Second Vice-President, was not present.

DR. A. J. PERKINS, Third Vice-President, was not present.

The Committee presented Dr. P. L. Thibaut, Secretary.

DR. THIBAUT: Gentlemen I think the less a Secretary says the better and the wiser, but you will all hear from me at some time during the year, as you have in the past, but I hope oftener. The organization seems to be progressing very nicely in this State, but we still have room for improvement. I hope that every one of the officers, and particularly the Councillors, will get busy in carrying out the work of organizing the parishes that have not yet been organized.

The Committee presented Dr. Jules Lazard, Treasurer.

DR. LAZARD: Gentlemen, I have no speech to make except to say that I seem to be afflicted with a case of chronic Treasuritis. I thought that I had escaped but that does not seem to be the case. I will be an executioner and those of you who do not pay will get their heads cut off.

The Committee presented the following Councillors: Dr. P. E. Archinard; Dr. E. J. Graner.

On motion of DR. THIBAUT, all papers not read by their authors were read by title and referred to the Committee on Publication.

DR. BRUNS: You have seen the difficulty that has existed this year in dealing with the papers to be read. The number of papers is continually increasing. I think the Society ought to pass a rule that an abstract of each paper be furnished, and that the abstract

should be read. That is a matter I would like for the members to think about. The only other thing I can see would be for the Society to divide into sections and I would dislike to see this very much. I believe that the good we get is from all the papers. We will either have to divide the Society into sections or require abstracts of the papers containing the salient points.

DR. PERKINS: I do not know how we can get at that. However, I move that the Secretary notify all contributors that they are requested to read their papers in abstract.

Seconded and carried.

There being no further business the meeting was adjourned, to meet in New Orleans on May 14, 15, 16, 1907.

P. L. THIBAUT, M. D.

Secretary.

CHAIRMEN OF SECTIONS FOR 1907 MEETING.

The President has appointed the following chairmen of sections for the 1907 meeting:

GENERAL MEDICINE.—Dr. J. D. Hanson, Donaldsonville.

SANITARY SCIENCE AND QUARANTINE.—Dr. J. N. Thomas, Quarantine.

X-RAY AND ELECTRO-THERAPEUTICS.—Dr. N. F. Thiberge, New Orleans.

DISEASES OF CHILDREN.—Dr. J. S. Stephens, Natchitoches.

ORAL SURGERY.—Dr. L. D. Archinard, New Orleans.

MATERIA MEDICA AND THERAPEUTICS.—Dr. C. J. Gremillion, Alexandria.

SURGERY.—Dr. E. D. Newell, St. Joseph.

NEUROLOGY.—Dr. R. M. Van Wart, New Orleans.

GENITO-URINARY DISEASES.—Dr. Charles Chassaignac, New Orleans.

OTOLOGY.—Dr. J. P. Leake, New Orleans.

BACTERIOLOGY.—Dr. J. D. Weis, New Orleans.

DERMATOLOGY.—Dr. Ralph Hopkins, New Orleans.

Chairmen of the other sections will be announced later.

Chairmen are requested to select their openers of discussion, and to send the names thereof to the Secretary.

N. B.—The Committee on Scientific Work request the Chairmen of Sections, at their earliest convenience, to furnish the subject of their section and the names of the openers of discussion.

ELECTION OF OFFICERS.

ORLEANS PARISH MEDICAL SOCIETY elected the following officers at the Annual Election, held December 8, 1906: President, Dr. John J. Archinard; First Vice-President, Dr. J. B. Elliott, Jr.; Second Vice-President, Dr. J. B. Landfried; Third Vice-President, Dr. John Laurans; Secretary, Dr. Amédée Granger (re-elected); Treasurer, Dr. E. O. Trahan; Librarian, Dr. Homer Dupuy (re-elected); Additional Members Board of Directors, Drs. C. Jeff Miller, G. Farrar Patton and E. J. Graner.

ST. JOHN-ST. CHARLES BI-PARISH MEDICAL SOCIETY held its annual meeting on December 4th, and elected the following officers: President, Dr. S. Montegut, of Laplace; Vice-President, Dr. J. P. Elmore, of Edgard; Secretary-Treasurer, Dr. E. P. Feucht, of Garyville (re-elected).

PROCEEDINGS OF THE BI-PARISH MEDICAL SOCIETY, COMPOSED OF RED RIVER AND NATCHITOCHES PARISHES.—At a regular meeting of the Bi-Parish Medical Society, held at Natchitoches, La., on Wednesday, December 5, the following answered to roll call: W. T. Williams, J. B. Pratt, J. B. Hargrove, Z. T. Gallien, J. S. Stephens, of Natchitoches; E. O. Edgerton, Coushatta; W. E. Addison, Provencal; S. D. Kearney, Powhattan; E. W. Breazeale, Campti; J. T. Keator, Bermuda; O. C. Teagle, Clarence.

Minutes of last meeting were read and adopted.

On motion of Dr. Hargrove, seconded by Dr. Williams, applications for membership were considered, and the following new members elected: P. E. Bechet, Joe Bath, of Natchitoches; J. A. Young and J. N. Brown, of Campti.

By Dr. Stephens, that a Committee of three members be appointed to investigate the by-laws of the State Medical Society, pending action by this Society, as to the re-instatement of members dropped from the rolls for non-payment of dues.

By Dr. Hargrove, that a Committee of three members be appointed to confer with the De Soto Medical Society, with the view of having that Society affiliate with the Bi-Parish Medical Society, and converting the two Societies into a Tri-Parish Medical Society, and if such union could be accomplished, that the new Society meet three times a year alternately in the towns of Natchitoches, Coushatta and Mansfield.

Motion by Dr. Hargrove, that hereafter six medical papers be read at each meeting; three by members from Red River Parish, and three from Natchitoches Parish. Two papers each on Surgery, Gynecology, Obstetrics and Practice.

By Dr. Williams, that each member report all noted quacks in the two parishes to the Secretary, and he in turn to the proper authorities for prosecution.

Dr. Keator reported an interesting case of convulsions, and Dr. Williams a case of small-pox which was not modified by timely vaccination.

Dr. E. W. Breazeale read a paper on Mitral and Aortic Insufficiency or Regurgitation, which was requested by the Society, on motion of Dr. Hargrove, to be turned over to the Secretary for publication in the *NEW ORLEANS MEDICAL AND SURGICAL JOURNAL*.

The following were appointed to prepare papers to be read at the next meeting: Drs. Kearney and C. E. Edgerton on Surgery; Drs. J. B. Hargrove and R. L. Jones on Gynecology and Obstetrics; Drs. O. C. Teagle and W. W. Tear on Practice.

Invitation to a sumptuous spread was extended the members by the physicians of Natchitoches; accepted, and to which they did ample justice.

The meeting then adjourned to convene at Coushatta, on Wednesday, April 3, 1907.

(Signed)

E. W. BREAZEALE, M. D.,

Secretary and Treasurer.

Medical News Items.

TABLET IN HONOR OF DR. REED.—A bronze tablet measuring three by four feet has been placed in position in the Kings County Hospital in Flatbush, in memory of the late Dr. Walter Reed, who was a former interne of the hospital. The tablet, which is the gift of the Alumni Association of the Hospital, bears the following inscription: Erected by the Association of Ex-Internes of the Kings County Hospital to the memory of Walter Reed, M. D.,

interne in this hospital, 1871; Major and Surgeon U. S. A.; Chairman United States Yellow Fever Commission, 1900-1901. He robbed the pestilence of its terrors, and caused the cities of the Southland to sit in peace within their gates.

ANNOUNCEMENT BY THE CITY BOARD OF HEALTH.—The Board of Health of the City of New Orleans announces that its bacteriological laboratory is now located at the New Orleans Polyclinic building at Tulane Avenue and Liberty Street, where it is prepared to examine secretions from diphtheria cases or suspects; to assist physicians in cases of tuberculosis or suspected tuberculosis; to examine blood for typhoid and malaria. All necessary tubes, jars, etc., are supplied here, and regulations and methods to comply with the rules of the laboratory may be had on request. Circulars of information have been issued, showing the comprehensive work of this department, which deserves the credit its service entails and should meet with encouragement at the hands of the profession.

MEETING OF THE AMERICAN INTERNATIONAL CONGRESS ON TUBERCULOSIS.—The American International Congress on Tuberculosis was held on November 14 and 16, at the Hotel Astor in New York City. Louisiana was honored by the election of Dr. C. H. Irion, of New Orleans, as President-Elect. Quite a number of the old officers were re-elected: Dr. F. E. Daniel, of Texas, being made one of the honorary presidents. Mr. Clark Bell retired as Treasurer; Dr. M. M. Smith, of Austin, Texas, was elected in his stead.

LATE MEETING OF THE AMERICAN PUBLIC HEALTH ASSOCIATION.—The American Public Health Association at its last meeting in Mexico City, December 7, voted to meet in Atlantic City, N. J., next year. Dr. Quitman Kohnke, of this city, was elected First Vice-President.

ANNUAL MEETING OF THE SOUTHERN SURGICAL AND GYNECOLOGIC ASSOCIATION.—The nineteenth annual meeting of the Southern Surgical and Gynecologic Association was held in Baltimore December 11, 12 and 13, 1906, and the following officers were elected: Dr. Howard A. Kelly, Baltimore, Maryland, President; Dr. Rufus E. Fort, Nashville, Tenn., First Vice-President; Dr. H. A. Royster, Raleigh, N. C., Second Vice-President; Dr. Wm. D. Haggard, Nashville, Tenn., Secretary; Dr. Chas. M. Rosser, Dallas,

Texas, Treasurer. The next meeting will be held in New Orleans, and Dr. Denegre Martin, of this city, was elected Chairman of the Arrangement Committee.

MEETING OF THE MISSISSIPPI VALLEY MEDICAL ASSOCIATION.—At the last meeting of the Mississippi Valley Medical Association, held in Hot Springs, Arkansas, Columbus, Ohio, was selected as the next place of meeting during October, 1907. It was voted at this meeting to offer a prize of \$100 to members of the Association for the best essay recording some original research work in the Mississippi Valley. A Committee of three was appointed who will formulate rules of the contest, which will be published later.

SANITARY CAMPAIGN IN MONTGOMERY, ALA.—A sanitary campaign has been organized in Montgomery, Alabama, under the auspices of the State Board of Health and the physicians of Alabama. Dr. J. N. McCormick, the official representative of the American Medical Association, delivered the first of a series of public addresses. Twenty public speeches were to have followed throughout the State, closing, December 22, at Bessemer. "The Patent Medicine Evil and How to Cure It," was one of the subjects to be discussed by Dr. McCormick.

TRI-STATE MEDICAL ASSOCIATION OF LOUISIANA, TEXAS AND ARKANSAS.—At a recent meeting of this organization, held in Marshall, Texas, the following officers were elected: President, Dr. Holman Taylor, of Marshall; Vice-President, for Arkansas, Dr. A. U. Williams, of Hot Springs; Vice-President, for Louisiana, Dr. J. L. Wilson, of Alexandria; Vice-President, for Texas, Dr. Becton, of Greenville; Secretary, Dr. R. H. T. Mann, of Texarkana, Ark.; Treasurer, Dr. I. M. Calloway, of Shreveport.

THE TRI-STATE MEDICAL ASSOCIATION, which met in Memphis recently, elected Dr. F. J. Runyan, of Clarksville, Tenn., President.

XIVTH INTERNATIONAL CONGRESS FOR HYGIENE AND DEMOGRAPHY.—Her Majesty, the Empress of Germany, has most graciously accorded her high protectorship to the work of the XIVTH International Congress for Hygiene and Demography, which will take place in Berlin in September of next year.

MEETING OF THE SHREVEPORT MEDICAL SOCIETY.—At the annual meeting of the Shreveport Medical Society, held in December, the following officers were elected: Dr. G. B. Lawrason, President;

Dr. A. B. Bugg, Vice-President; Dr. S. C. Barrow, Secretary, and Dr. W. L. Egan, Treasurer.

INCORPORATION OF MEDICAL JOURNALS.—The *Therapeutic Gazette* will incorporate, January first, *Medicine* and the *Medical Age*. The triple publication will be under the editorship of Drs. H. A. Hare and Edward Martin, already identified with the first named periodical.

NEW EDITOR FOR OKLAHOMA MEDICAL-NEWS JOURNAL.—The *Oklahoma Medical News Journal* will have a new editor, Y. E. Colville, B. S., M. D., of Chattanooga, Tennessee, beginning with the January, 1907, issue.

THE LAST BULLETIN OF TULANE UNIVERSITY notices the registration of 509 medical students in the graduate and under-graduate departments.

HEALTH OF THE CANAL ZONE.—Dr. Gorgas reports from the Canal Zone that there was not a single death in sixty days among the five thousand Americans working on the canal.

MORE BEDS AT TOURO INFIRMARY.—The Touro Infirmary has increased its capacity of seventy to one hundred and fifty beds.

GRADUATING EXERCISES OF THE CHARITY HOSPITAL TRAINING SCHOOL FOR NURSES.—The Charity Hospital Training School for Nurses held its graduating exercises on December 12, and twenty-one nurses received diplomas. Bishop Sessums delivered the oration.

PERSONALS: Drs. Greenlaw and Jones, of Franklinton, La., lost their office and fixtures by fire recently.

Dr. R. Sauvage has just returned from a visit to his nephew, Dr. Ernest Laplace, who is a professor of surgery in the Medico Chirurgical College of Philadelphia.

Dr. W. E. Van Zant has returned from South America, and will spend the winter in New Orleans.

Dr. J. M. Ehler, who graduated from Tulane in 1904, has located in this city, after spending the past two years in Texas.

Dr. Warren S. Bickham has opened an office in this city at No. 830 Canal Street.

Dr. A. J. Newman has moved from Hillsdale, La., to Greensburg, La.

L. W. Bremerman, A. M., M. D., of New York City, has been appointed Professor of Genito-Urinary Diseases in the New York School of Clinical Medicine, to fill the vacancy caused by the death of Professor William K. Otis, M. D.

MARRIED: Dr. Robert A. Bailey to Miss Rosalie Ellis, on November 28, 1906.

DIED: At Kenner, La., on November 24, 1906, Dr. Stephen Duncan Gustine, aged thirty-one years.

Obituary resolutions were passed by the New York School of Clinical Medicine, on October 31, on the death of Dr. William K. Otis, who was prominently connected with this school.

Book Reviews and Notices.

All new publications sent to the JOURNAL will be appreciated and will invariably be promptly acknowledged under the heading of "Publication Received." While it will be the aim of the JOURNAL to review as many of the works received as possible, the editors will be guided by the space available and the merit of the respective publications. The acceptance of a book implies no obligation to review.

Food and Diet, by ROBERT F. WILLIAMS, M. A., M. D. Lea Bros. & Co., Philadelphia and New York, 1906.

Most works on Food and Diet are so voluminous and so abounding in detail, that the average medical man has neither the courage nor the time necessary for their perusal. Dr. Williams has evidently recognized the demand for a smaller work dealing with this subject, and has succeeded in getting into a small amount of space a large amount of valuable information about Food in Health and Disease. His Book is compact but complete. The subject matter is well arranged and digested. A number of well chosen diet lists and receipts add to its value.

J. T. H.

Materia Medica and Pharmacology, by DAVID M. R. CULBRETH, Ph. G., M. D. Lea Bros. & Co., New York and Philadelphia.

Although the title page states that this book is intended for students of medicine and physicians as well as for students of pharmacy, we believe it to be eminently unfitted for both students and practitioners of the healing art. A book in which more than ten pages are devoted to a description of the natural history, physical and pharmaceutical properties, and chemistry of opium and its derivatives, with a scant two pages dealing with their action and uses, is one the reviewer cannot altogether recommend.

J. T. H.

Chemistry: General, Medical and Pharmaceutical, by JOHN ATTFIELD, F. R. S. Edited by LEONARD DOBLIN. Nineteenth Edition. Lea Bros. & Co., Philadelphia and New York, 1906.

This book comes to us as an old friend. For the best part of thirty years it has been recognized as a safe guide for medical and pharmaceutical students, which status it has retained in this its nineteenth edition.

The author's idea to produce a manual of chemistry for medical and pharmaceutical students, embodying all that is really essential to them, has been well carried out in this work.

STORCK.

A Practical Text Book of Midwifery for Nurses, by ROBERT JORDINE, M. D. (Edin.), M. R. C. S., etc. Third Edition. Henry Kimpton, London; W. T. Keener & Co., Chicago.

This is a compact little volume of 275 pages, well illustrated and very convenient in its arrangement. It is decidedly one of the best books of the day on the subject and can be read with profit by both nurses and physicians.

MILLER.

Uric Acid: The Chemistry, Physiology and Pathology of Uric Acid and the Physiologically Important Purin Bodies, With a Discussion of The Metabolism in Gout, by FRANCIS H. MCCRUDDEN.

This is a timely contribution to the literature of uric acid.

While the last word on the metabolism of uric acid has not been said, recent researches have settled many points of fundamental importance in the theory of uric acid metabolism and gout. This work well defines the present status of the subject.

The publications of Burian and Schur have been drawn on. These publications show that it is the purin bodies of the food, either free or combined in nuclein, and only the purin bodies, that have any influence in the execution of exogenous uric acid.

Much of the information contained in Fischer's paper showing the importance of the purin bodies in uric acid metabolism is here set forth.

The researches of His and Hober, as the author shows, put an end to many theories concerning uric acid in the blood and in the urine, and to any scientific basis for the alkali therapeutics in gout. The careful perusal of this work will convince the unbiased student of the subject that most of Haig's news of the importance ascribed to uric acid in pathology has been overstated.

The subject matter is grouped under three heads: I. Chemistry; II. Physiology; III. Pathology. The work is exhaustive, and it is the most scientific exposition of this subject in the English language.

STORCK.

Obstetrics, edited by JOSEPH B. DE LEE, A. M., M. D., with the collaboration of D. ROEHLER, M. D., and HERBERT M. STOWE, M. D. The Year Book, Publishers, Chicago.

This is volume five of the Practical Medicine Series, and may be considered an excellent review of the year's work in obstetrical literature. The questions at present under special discussion are, pubiotomy, eclampsia, vaginal Cesarean section, Bossi's dilator, and the surgical treatment of puerperal infections. Dr. De Lee's review of these subjects is quite complete and well constructed. The attempt throughout has been to discuss practical subjects in preference to theories, a point which adds to the value of the book.

MILLER.

A Text Book of Elementary Analytical Chemistry, Qualitative and Volumetric, by JOHN H. LONG, M. S., Sc. D. Blakiston Son & Co., Philadelphia, 1906.

In the first edition of his work, Dr. Long has made a departure from the usual method formerly taught in the majority of laboratories, i. e., of following the qualitative course with gravimetric analysis. He suggests giving a course in volumetric analysis immediately following qualitative analysis. This plan is now followed by many teachers of chemistry and is destined to grow further in favor.

In the part devoted to volumetric analysis, methods for the titration of borates and formaldehydes have been added. STORCK.

Elements of General Chemistry With Experiments, by JOHN H. LONG, M. S., Sc. D. P. Blakiston's Son & Co., Philadelphia, 1906.

Freshmen students will find this work one of the clearest expositions in elementary chemistry extant. At no time does the author lose sight of the fact that he is writing for beginners, few of whom expect to become specialists in chemistry. The book is singularly free from parade of unnecessary matter, padding finding no place between its covers. The book is as full as a nut of good matter, and is a fitting companion to the author's text book on elementary analytical chemistry. STORCK.

The Practice of Gynecology, by eminent authorities, edited by J. WESLEY BOVEE, M. D. Lea Bros. and Co., Philadelphia and New York, 1906.

This work is one of three companion volumes covering Gynecology, Obstetrics and Pediatrics, and is announced in the preface as a practical treatise on the diseases of the generative organs of women, and of the urinary system and rectum. The text is edited by J. Wesley Bovee, who also contributes several valuable chapters. There are six other contributors, all well known authors, whose names have been connected for some time with the special work covered in the departments allotted to them.

Bovee has written the chapters on the Developmental Anomalies of the Female Generative Organs, Sterility, Diseases of the Rectum, Anus and the Urinary Tract; J. Riddle Goff, Menstruation, Displacements of the Uterus, The Vaginal, Method of Operating, and the After Treatment and Complications of Abdominal Operations; X. O. Werder, the Examination of Pelvic Contents, the Technic of Abdominal Operations and Extra-Uterine Pregnancy; Thos. J. Watkins, Infections of the Tubes and Ovaries; G. Brown Miller, Uterine Pathology; Geo. H. Noble, Fistulae, Lacerations of the Perineum and Diseases of the Vulva and Vagina; Benj. Schenck, Diseases of the Tubes and Ovaries, exclusive of Infections and Tubal PERNANCY.

If attention is to be called to any one chapter, the contributions of Noble, on fistulae and perineal lacerations, are especially worth of mention. The work of Miller, on the pathology and bacteriology of endometritis, is also a departure from the usual text book classification.

The text throughout is a concise and practical treatise on Gynecology, and no doubt the work will promptly find favor among both students and practitioners. MILLER.

The Physician's Visiting List. P. Blakiston's Son & Co., Philadelphia, 1907.

The fifty-sixth year of this valuable assistant to the busy practitioner finds it better than ever, in point of completeness and convenience of arrangement. It is furnished in three styles, the regular, the perpetual,

and the monthly edition. The dose table has been revised according to the new U. S. Pharmacopeia.

The Practitioner's Visiting List. Lea Bros. & Co., Philadelphia and New York, 1907.

The twenty-first year's issue of this list is up to the usual high standard. It comes in four styles, the weekly, the monthly, and two perpetual for 30 and 60 patients, respectively.

Publications Received.

Lea Bros. & Co., Philadelphia and New York, 1906.

Medical Epitome Series. Pathology, General and Special. Stenhouse-Ferguson-Pederson.

The Diseases of the Nose, Throat and Ear, by Chas. Grayson, A. M., M. D. Second edition, revised and enlarged.

Surgery. Its Principles and Practice, by Various Authors. Edited by William Williams Keen, M. D. Vol. I.

P. Blakiston's Son & Co., Philadelphia, 1906.

Text Book on Diseases of the Heart, by Graham Steell, M. D., With an Appendix on *The Volume of Blood in Relation to Heart Disease,* by J. Lorrain Smith, M. A., M. D.

Abdominal Pain: Its Causes and Clinical Significance, by A. Ernest Maylard, M. B., B. S. Second edition.

Year-Book Publishers, Chicago, 1906.

The Practical Medicine Series. Gustavus P. Head. Vol. VIII. Series 1906. *Materia Medica and Therapeutics; Preventive Medicine; Climatology; Forensic Medicine.*

Miscellaneous:

Golden Rules of Pediatrics, by John Zahorsky, A. B., M. D., with an Introduction by E. W. Saunders, M. D. (The C. V. Mosby Medical Book Co., 1906.)

Bulletin No. 57 of the Department of Commerce and Labor, Bureau of the Census. (Government Printing Office, Washington, 1906.)

Transaction of the Third and Fourth Annual Conference of State and Territorial Health Officers, With the United States Public Health and Marine Hospital Service, Washington, May 15 and 23, 1905.

Reprints.

The Female Prostate; (2) Renal Surgery in Europe; (3) Genito-Urinary Surgery in London Viewed Through the American Eye, by Chas. E. Barnett, M. D.

The Prevention of Tuberculosis by Building up the Defensive Powers, by Thos. Bassett Keyes, M. D.

MORTUARY REPORT OF NEW ORLEANS.

(Computed from the Monthly Report of the Board of Health of the City of New Orleans.)

FOR NOVEMBER, 1906.

CAUSE.	White.	Colored.	Total.
Typhoid Fever.....	5	2	7
Intermittent Fever (Malarial Cachexia)	2	1	3
Smallpox.....			
Measles.....			
Scarlet Fever.....			
Whooping Cough.....	4		4
Diphtheria and Croup.....	9	3	12
Influenza.....	3		3
Cholera Nostras.....	1		1
Pyemia and Septicemia.....	1		1
Tuberculosis.....	44	37	81
Cancer.....	20	8	28
Rheumatism and Gout.....	2	1	3
Diabetes.....	3		3
Alcoholism.....	4		4
Encephalitis and Meningitis.....	10	1	11
Locomotor Ataxia.....	1		1
Congestion, Hemorrhage and Softening of Brain.....	17	8	25
Paralysis.....	1		1
Convulsions of Infants.....	2		2
Other Diseases of Infancy.....	22	12	34
Tetanus.....	2	10	12
Other Nervous Diseases.....	2		2
Heart Diseases.....	44	22	66
Bronchitis.....	6	4	10
Pneumonia and Broncho-Pneumonia.....	17	25	42
Other Respiratory Diseases.....	5	4	9
Ulcer of Stomach.....	1	1	2
Other Diseases of the Stomach.....	3	2	5
Diarrhea, Dysentery and Enteritis.....	33	13	46
Hernia, Intestinal Obstruction.....	1	2	3
Cirrhosis of Liver.....	6	2	8
Other Diseases of the Liver.....	2	5	7
Simple Peritonitis.....	1	1	2
Appendicitis.....	2	1	3
Bright's Disease.....	26	17	43
Other Genito-Urinary Diseases.....	3	2	5
Puerperal Diseases.....	3	3	6
Senile Debility.....	17	14	31
Suicide.....	7		7
Injuries.....	16	20	36
All Other Causes.....	13	5	18
TOTAL.....	361	226	587

Still-born Children—White, 21; colored, 16; total, 37.

Population of City (estimated)—White, 245,000; colored, 88,000; total, 333,000.

Death Rate per 1000 per annum for Month—White, 17.68; colored, 30.82; total, 21.15.

METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmospheric pressure 30.10
Mean temperature 66.
Total precipitation 1.03 inches.
Prevailing direction of wind, northeast.

New Orleans Medical and Surgical Journal.

VOL. LX.

FEBRUARY, 1907.

No. 8

Original Article.

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. A complimentary edition of one hundred reprints of his article will be furnished each contributor should he so desire. Covers for same, or any number of reprints, may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

Septic Contra-Indications of General Anesthesia.

By J. D. BLOOM, M. D., New Orleans.

Acetonuria has been shown to exist from chloroform administration in septic conditions, and is very pertinent by mere name to designate a condition that must confront every general surgeon in a need to explain the diffuse and annihilating depressive sepsis that is awakened in a chloroform administration where a septic infection, with an effect that is unmistakable, exists.

Mr. Stiles, of Edinburgh, has gathered a mass of statistics to show, in a forceful way, this clinical fact, and it cannot be too emphatically proclaimed to the surgical world. My observations that were in part recited in a paper read before the State Medical Society of Louisiana, entitled, "A Septic Awakening Following a General Chloroform Anesthesia," have proven fruitful of a denouement of this fact through a like observation of Mr. Stiles, and whom

it was my good fortune to meet during my recent visit to Edinburgh. His showing of the comparative immunity in a like condition under ether administration is an observation for which the world owes him credit. I am certain that many surgeons can recall cases such as I have recited in my paper, and, too, will appreciate the explanation that is made so evident to me after a hospital experience of twenty years, during which time chloroform was the anesthetic in general use. One can appreciate the value of a knowledge pertaining to the comparative value of so important adjuncts to operative work, as anesthetics, their immediate and possible latent harm.

Those who in practice maintain the full etherization of their patients for an immunity to the harm of its administration, and in a quickened pulse or other unfavorable show in the average patient merely dwell on an increase of the anesthetic, which they by this judge needful, are wise without knowing it. How significantly unfavorable such an advice would be followed in a chloroform administration!

The fatty degenerative changes that occur under chloroform influence, frequently demonstrated, are mentioned as simply assertive of this one effect.

The delayed effect speaks for a radical change in tissue construction that an existing septic cause favors, and, in my experience, in every instance provokes. The rabbit experiments of Mr. Stiles would negative the absolute trueness of this observation, as the effect upon the liver of rabbits, apparently healthy, varied by the use of chloroform or ether, more favorably by the latter.

The yellow atrophy influence of chloroform anesthesia has been much discussed.

Heintz claims that a single prolonged inhalation of chloroform is able to give rise to fatal results in twenty-four hours by the pathological changes produced. Of course, he mentions idiosyncrasy, but he claims the organic changes to be due to the direct toxic action of the chloroform. The cause of death in cases having undergone general anesthesia, as Mr. Stiles mentions, have been attributed either to antiseptics, fat embolism, to sepsis, or delayed chloroform poisoning. Of course, it is remembered that it is sometimes impossible to obtain postmortem bacteriological evidence of a

general septicemia, and the bacteriological examination of the blood during life is essential to confirm the supposition.

It is possible that the pathology, as has been found after death by chloroform, may exist independent of its administration. The truth must remain, however, that too, it is a pathology of chloroform administration. Pathologists must determine for us the true nature of the vulnerability that chloroform sickness is typical of; its administration under conditions that clinical observation show harmful, as in conditions septic.

The statistics of Mr. Stiles additionally show that the symptoms are most severe and most frequent in patients suffering from any form of infective disease, whether acute or chronic. It was found that ninety per cent. of the cases of serious disturbance were operated on for some infective disease. Mr. Stiles admits that it is hardly justifiable to attribute the fatal results to hepatic insufficiency.

True, it is that idiosyncrasy may play an important part in many fatalities, but as Mr. Stiles very aptly says, this could not explain the delayed deaths that he concludes must be explained by some intoxication still obscure. He aptly compares the poisoning to others met with in auto-intoxications, for example: Diabetic coma, but this is confused by the production of a like condition by bacterial-toxins.

The purpose of this comment upon the denouement that my trip abroad has afforded is this: By laboratory and clinical experiment this "Septic Awakening," as I have called it in my previous paper, has been explained in a way, convincing as it must be, to every practical surgeon and doctor of medicine. That sepsis or its suspicion, I mean by this a condition though local, that can be awakened to a systemic spread and cause an overwhelming depression of the physiological resistance which, in truth, is life. The use of ether in septic cases for general anesthesia is by this proven as *the* anesthetic, and the clinical result as shown above, proves the war-rant.

Clinical Report.

A Case of Congenital Anidia with Systemmetrically Upward Dislocated Lenses,*

By Dr. O. SMITH, New Orleans.

C. L. White, male, 33 years old, presented himself at the clinic, and complained of being unable to see well since he can remember. No history of any injury to eyes. Mother says he was born this way. He could never see well enough to learn his letters, and because of the poor vision has only been able to do coarse work, such as a day laborer on a farm. Vision O. D., counts figures 3 feet. O. S. light perception.

His mother, six brothers and four sisters are all living and healthy. There is no history of any eye trouble in any of his family, either those living or those who have died.

External appearance. Patient keeps his eyelids half closed all the time. There is a marked nystagmus. Some slight ciliary injection of O. D. No trace of iris visible in either eye.

Ophthalmoscope: O. D., lens displaced upward to such an extent that only about $\frac{1}{3}$ of it can be seen.

The lens is opaque, and when he moves the eye you can distinctly see the lens shake, looking as if it were a small sack filled with a milk-like fluid.

It is apparently an over-mature cataract which has undergone a fluid degeneration. No outlines of the disc can be seen. The arrangement of the vessels and the macula region show nothing abnormal.

No signs of the iris or of a rudimentary iris are to be made out in this eye.

O. S., lens in this eye is not opaque, but it is displaced upward.

No outlines of a disc can be seen; the vessels and the macula region show nothing abnormal. Some opaque shreds can be seen floating in the vitreous when the eye is moved. A small spot of old

*Reported from the Service of Dr. Henry Dickson Bruns, Eye, Ear and Nose Hospital.

choroiditis, about a disc's diameter, is seen in the lower part of the fundus. In this eye there are several small projections in front of the lens, especially outward. They look as though they might be parts of a rudimentary iris. Nothing else resembling an iris can be detected.

Retinoscope shows $+11.00^s$ in O. D. and $+7.00^s$ in O. S.

Patient refused to allow trial test case to be made, as he was afraid his eyes were going to be operated on, and left before anything further could be determined.

Louisiana State Medical Society Proceedings.

(EDITED BY PUBLICATION COMMITTEE).

P. L. Thibaut, M. D., Chairman.

MEETING OF 1906.

Gastric Disturbance Due to Diseases of the Frontal Sinus.

By J. A. STORCK. M. D., M. Ph., New Orleans.

It has long been recognized that catarrhal disease of the nose and throat is a potent factor in disturbances of the gastro-intestinal tract, but, judging from the lack of mention in medical literature of the part played by diseases of the frontal and accessory sinuses in gastric disorders, we might conclude that disease existing in these locations is rarely a causative factor in gastric disturbances.

That such is not true has for a long time been patent to me. Some time ago it was my good fortune to have two cases come under my observation in close succession, which cases I was able to keep track of until they were cured. The two cases I forthwith report will show the important role which disease of the above mentioned sinuses plays in some obscure gastric derangements.

As the connection was so well established between the frontal sinus disease and the gastric disturbance, which was the complaint for which the patient sought relief, I am prompted to make this report that others may be induced to relate their experiences along similar lines.

CASE I. Mr. F., aet 35, a native of New Orleans, and keeper of a coffee stand in public market. He was in good flesh and of ruddy complexion. He sought my advice, claiming to be suffering from dyspepsia for which he had been treated by several physicians for more than one year. Previous to his present illness his medical history was good; there was no history, or evidence, of syphilis. The symptoms described were slight frontal headaches, eructations of gas, nausea and vomiting at long intervals. An occasional diarrhea was followed by constipation. The appetite was somewhat impaired.

Examination of the lungs, heart and liver proved negative. The lower border of the stomach, determined by means of inflation of the organ, was found to be about one inch above the umbilicus. No displacement of the abdominal viscera could be ascertained. The capacity of the stomach was 1,600 c. c. Motility was normal.

The examination of the stomach contents was conducted as follows: The night before examination the stomach was well cleansed by means of the stomach tube and hot water (110° F.). In the morning Ewald's test breakfast was given, one hour afterwards to be withdrawn and examined chemically and microscopically.

Four examinations conducted after this manner proved the stomach contents to be normal, with the exception always of the presence of some pus. After obtaining the amount of stomach contents desired for examination, the stomach was well lavaged with hot water, when more pus was observed.

Two examinations of the feces showed the presence of pus.

One examination of the urine showed a large amount of indican; otherwise it was normal.

No blood examination was made in this case.

An examination of the nose showed the presence of pus. I then referred the case to Dr. Homer Dupuy, who, upon examination, found the frontal sinus diseased. After repeated irrigations by the doctor the patient made a good recovery from the sinus trouble. The gastric symptoms thereupon disappeared without any further treatment.

CASE II. Mrs. G., aet 47, consulted me for persistent nausea. She was emaciated, weighed 120 pounds, and stated that she had lost weight during the previous two years. She had a distaste for

food. Her skin was sallow. She had had malaria for some years. She also complained of some uterine disorder (not determined). At times she had slight frontal headaches. There was no evidence of syphilis. Examination of the lungs proved negative. Noticeable with the first sound of the heart was a slight blowing, which disappeared at times. The liver was normal.

The lower border of the stomach was determined by means of inflation, and was found to be one and one-quarter inches above umbilicus. No displacement of abdominal viscera could be determined. The capacity of the stomach was 1,500 c. c.

Repeated examinations of the stomach contents, following the same plan as in Case I, showed a slight diminution in free hydrochloric acid, with impaired peptic digestion. Motor function of the stomach was delayed.

Examination of urine showed excess of phosphates and the presence of a large amount of indican. In one of the five specimens of urine examined the urea output was below normal.

Examination of blood for malarial plasmodium and Widal's reaction was negative. Blood count showed red cells to number 4,400,000; white cells, 12,000; haemoglobin, 60%, Tallquist.

In examination of feces no pus was found.

The true cause of the nausea in this case remained unknown to me for about four weeks; for, in spite of frequent lavage of the stomach no pus was discovered in the wash water until the end of that time, when pus was seen occasionally. Several examinations of the nose also failed to reveal any pus until later. Even in my later examinations I found that pus did not escape at all times from the sinus, the discharge ceasing for several consecutive days. This probably explains why pus was not always found.

As soon as I discovered the probable cause of the nausea I referred the patient to Dr. Homer Dupuy, who, upon examination, found the frontal sinus diseased. After repeated irrigations of the sinus by Dr. Dupuy the nausea abated considerably; but, in spite of all that we might do, the case did not improve rapidly.

Just here I may say that I practiced lavage of the stomach daily, from the first using a .2% watery solution of hydrochloric acid. This treatment seemed to give some relief, and was continued. I also gave one drachm of fluid extract of condurango by the mouth

three times daily. When the nausea was persistent or severe menthol and spirits of chloroform were administered.

As the patient was not improving to the satisfaction of Dr. Dupuy and myself, we determined to advise a change to a higher altitude in the hope that microbic infection would be less active and a cure more likely to follow. That our judgment was correct subsequent events have proved. The patient went to California and remained away about one year. Returning recently, she shows a gain of forty pounds, now weighing one hundred and sixty. Her strength is regained. She now has a normal blood count and 90% hemoglobin by Tallquist's scale. Her nausea disappeared as soon as the frontal sinus disease, for which she continued to be treated in California, was cured. The change to higher altitude was in all probability responsible for much of the improvement in this case.

In both of the cases described it is plainly evident that the pus discharged from the frontal sinus was the direct cause of the gastric disturbance; for, as soon as the frontal sinus disease was cured the gastric disorder disappeared.

In conclusion I would say that in all obscure gastric derangements it is well to examine carefully the frontal and accessory sinuses; also, the mouth and post-nasal space.

What Every Physician Should Know of Ophthalmology.

By DR. HENRY DICKSON BRUNS, New Orleans, La.

In what direction is the rapid rise, increase and perfection of specialism in medicine during the last half century leading us? Is the profession to fall into a condition of infinitesimal subdivision, such as Herodotus describes among the Egyptians of his time, with all that this means of narrow viewpoint and imperfect co-ordination? Is the general practitioner, the once honored family physician, to become the mere analogue of the committing magistrate, and to take his fee for preliminary examination and advice as to which specialist the case is to be confided? In such event will he not, like the English solicitor, become of necessity surrounded by his particular coterie of specialists, from whom he shall receive his proper commission for each patient referred? At present this would seem to be the tendency. But unless our civilization should fail,

and thus time not be afforded for evolution to reach its proper end, I believe a happier and worthier conclusion must be reached. In each speciality the enormous mass of particulars will be more and more reduced to generalizations; the vast array of facts will be organized and systematized, correlated and brought together under great principles and laws; so that the specialized labors of the few will be made readily available to all. That a few broad divisions, founded on the need of peculiar skill in the management of certain armamentaria, will persist, I do not doubt; but the subdivisions will be decreased, not multiplied. I see this in my own specialty; the great questions are nearly all answered, the controlling principles nearly all laid down. We are engaged for the most part in perfecting the technique of this or that operation, in establishing the diagnosis and pathology of a few relatively rare maladies, or in seeking remedies more nearly specific for diseases of the organ which we treat. Already much of the knowledge of this branch is so perfected as to be ready to hand over to those engaged in general practice.

When, with the better teaching of ophthalmology in our longer undergraduate medical courses, the increase of post-graduate and polyclinic instruction, the principles of diagnosis of diseases of the eye shall be more widely understood, the treatment of the simple diseases will pass out of our hands. An example of what I mean is seen in the use of the comparatively new compound argyrol. The fact of its being an efficient, harmless antiseptic, admirably adapted for use in the eye, has become known to the profession at large, and its use in acute conjunctival inflammations has become so general that many of these cases no longer find their way to the specialist. But there are certain of its qualities which are not, but which should be, as widely appreciated. In the first place though an excellent antiseptic, argyrol is by no means an active astringent. In the treatment of all catarrhs of the conjunctiva some more powerful astringent should also be employed. In the acute infectious catarrh commonly known as "pink-eye," the instillation of a 10 % solution of argyrol and of a one-eighth to one-fourth grain to the ounce solution of zinc sulphate on alternate hours, comes as near to a specific treatment as possible. In purulent cases, on the contrary, the argyrol should be instilled every

fifteen minutes or half hour, until all pus formation has ceased, and then the use of the astringent be begun. As argyrol is the only non-irritating antiseptic which can be used in the eye *ad libitum*, it should be employed in the case of all wounds. Scrupulous observance of asepsis and antiseptics should be the rule in removing foreign bodies from the cornea. Those that cannot be swept away by a bit of absorbent cotton tightly twisted around the end of a probe, or whittled down match, must be picked out with a metallic instrument. This should always be whipped several times through the flame of an alcohol lamp to sterilize it. The body removed, the patient should be given a drachm of the 10% solution with directions to instill it every hour or so for twenty-four hours, or longer, until all redness and irritation have disappeared. If the excoriation produced by the body or our efforts at removal seem at all larger or deeper than usual, the safest way is to wash the eye several times with argyrol (in my clinic a 50% solution of enzymol is used in addition), to lay on the closed lids a disc of linen or gauze soaked in the same solution, then a pad of absorbent cotton, and over all a bandage. If all redness has disappeared, the dressing can be discontinued after twenty-four hours and argyrol repeatedly instilled. If redness and irritation persist the dressing is best continued until these disappear.

I am told in the German army all wounds of the digits must be carefully cleansed and kept under an antiseptic dressing until healing is complete. It is said that this has been the saving of many days and weeks of invalidism, and has prevented numberless cases of bad hands and feet. The analogy holds with any abrasion, any break in the epithelium of the cornea. No one can say that the most innocent seeming foreign body may not be the starting point for an infected ulcer of the cornea which may destroy an eye. By keeping among his drugs a little of Merck's solution of fluoresceine a physician may readily save himself many embarrassments, and clear up many a doubtful diagnosis. A drop of this harmless solution may be dropped into any eye. After all trace of it has been washed away with clear water, if a break in the corneal epithelium exists it will be stained a bright green. In this way lesions which may otherwise escape searching scrutiny will be rendered conspicuous. Their extent is clearly mapped out, and one learning that a gap in the epithelium exists realizes that the way is open to infection, with all of its disastrous possibilities.

Even when the patient with purulent ophthalmia of a corneal lesion is to be sent to the specialist, he should be started on the very frequent use of argyrol. When this use of the salt has become more general we shall see fewer cases of blindness from corneal scars. It should, too, go far toward removing the opprobrium of ophthalmia neonatorum. So far as time has afforded for the test, it seems able to abort this disease, and as it is absolutely non-irritating and harmless in all conditions of the eye, there is no reason why a few drops of a 20% solution should not be instilled in the eyes of every newborn infant; silver nitrate, for the present, being reserved for those cases in which we know gonorrhea to be present. A few years of this practice and there would be fewer pitiful victims of this disease found in our blind asylums and schools. The fact that argyrol is, like all the silver salts, unstable, should also be widely known. I am glad to see that its manufacturers are beginning to disseminate information on this point. It keeps better in dark bottles and in dark places; for this reason, and because it is expensive, it should always be prescribed in small quantities, a drachm or two. After a solution has been kept two or three weeks it begins to sting or smart the eyes, a sure sign that decomposition has begun. This length of time, however, usually marks the limit of its usefulness, for it must never be forgotten that the conjunctiva will resent the indefinite application of even the blandest substances. It falls to our lot not seldom to see cases of conjunctivitis and conjunctival hyperemia which have been kept alive by too vigorous therapeutics. In the treatment of all affections of this membrane the principle of treatment is to begin with too weak rather than too strong an application; to feel our way to an application of sufficient strength, and then to lessen the strength and increase the time between applications of the remedy as the case progresses toward cure. The physician should bear in mind that in all deeply depressing general diseases, especially in middle-aged or old people, the cornea, by reason of its precarious nutrition, is liable to ulcerations. In smallpox and in herpes frontalis vesicles often occur on this membrane, and in our country a peculiar form of corneal ulceration, readily recognizable by the initiated, is frequently seen in those suffering with chronic malaria. In such cases remembering to instill argyrol until the general health is improved may avert disastrous consequences, for it is shocking to bring a patient safely through

such an illness, only to find upon recovery that sight has been destroyed.

From what has been said you will readily perceive that every physician should teach himself to discriminate between ordinary cases of conjunctivitis, corneal lesion and iritis; and this is not difficult, though the recognition of rare or complicated conditions may require study and practice. The constant presence of increased secretion, the thickness and redness of the conjunctiva of both balls and lids, the presence of the least injected zone immediately around the cornea, denote with sufficient clearness the presence of conjunctivitis. But be suspicious of monocular conjunctivitis; this is nearly always due to traumatism, or the presence of a foreign body, or to tear-sac disease. Corneal lesions can nearly always be recognized by careful examination with a magnifying glass, especially if the simple art of oblique illumination with a condensing lens has been learned. Few instruments prove more generally useful to the practitioner than the inexpensive Berger's binocular loupe, and no search for a foreign body can be called thorough and complete unless these adjuvants are employed. All affections of any standing or severity cause opacities of the cornea. The circumcorneal injection of corneal affections is delicate and pink, not red in color, unless ciliary hyperæmia complicates the case; but we should remember that this always occurs in corneal disease of severity and of several days' duration.

Iritis is usually monocular; the injection is red and most conspicuous immediately around the cornea; the conjunctiva of the lids is neither thick nor red; there is no discharge. While the pain in conjunctivitis is smarting, grating, that of corneal lesions lancinating, as though due to the presence of a foreign body, and accompanied with photophobia; that of iritis is a neuralgia of the fifth nerve, usually severe, worse at night, and coming in paroxysms, often of great severity. Failure to make the diagnosis, the employment of a mistaken theurapeusis is certain to be damaging, often fatal to the eye and its function. Iritis is most often confounded with acute glaucoma; but the physician who has the possibility of glaucoma ever in mind is not likely to be mistaken. It is most readily recognized; the mistake is due to being preoccupied with the notion of the far commoner iritis. A painful inflammation of the eye, with a dilated pupil, shallow anterior chamber, and a dull looking cornea and lens, must be glaucoma. In

iritis if no mydriatic has been used, the pupil is as small, at any rate, and the anterior chamber is as deep as in the fellow eye. In glaucoma the eyeball is hard—the tension is elevated. This can easily be determined by making the patient look down, so as to carry the cornea out of the way, for tension over the anterior chamber is always high, and gently pressing through the upper lid on the sclera. Every one may become familiar with normal tension by experiment upon himself. Glaucoma is usually of sudden onset, and is commonly supposed by the sufferer to be neuralgia. If the physician makes this mistake also, the eye is lost; for the whole hope of salvation is centered in a properly performed iridectomy. The disease is nearly always—always outside of the large towns—first seen by the family physician. He should know that an inflamed eye may cause neuralgia, but that neuralgia cannot give rise to more than slight pinkness and moisture of the eye, at worst. Should he fail, what more embarrassing to the one who knows than the necessary endeavor not to expose an otherwise competent and estimable confrere. The diagnosis is absolutely important, because that which is our sheet anchor in iritis is fatal in glaucoma. In iritis with atropin we furl and immobilize the inflamed iris, and draw it away from the projecting face of the lens to which it will become adherent. In glaucoma atropin, by increasing tension, adds fuel to the flames. In glaucoma eserine—especially if dissolved in a 4 % solution of cocain—by lessening tension gives relief and affords opportunity to the patient to seek operative rescue. Use a two grain to an ounce solution frequently until relief is obtained. Use it for effect, not at stated intervals. Remember it is far less fatal to instill eserine into an eye affected with iritis than to drop atropin into one with glaucoma. In the one case increased redness and pain will soon show us our mistake and it can be corrected by the vigorous use of one per cent. atropin solution. But atropin exercises such a baneful influence in glaucoma, and is so much more powerful a drug than eserine, that such an error is usually irrevocable, and dooms the eye to speedy death. It is always to be remembered that atropin is a risky drug in those of middle age, and the more dangerous the older. Touch your elderly patients lightly then with atropin—even with cocain and the milder mydriatics—and never forget to watch the tension of the eye while using it. One who cannot estimate tension, cannot tell whether the affected eye is harder than its fellow, should not use atropin in the elderly, and

should not long continue its use at any age without seeking special counsel. Cocain, too, is a risky drug to use for any considerable length of time. This is especially true in corneal affections, in which the relief it affords often leads to its unwise use. For, besides causing tension, it produces, as you will all remember, death of the corneal epithelium, and so greatly increases the risk of infection of the already diseased or injured tissue.

Another trouble about which the family physician of our towns and country neighborhoods is usually first consulted is lachrymal obstruction—overflow of tears—*stillicidium*. This is a far less serious matter than glaucoma, but no one who has witnessed the long discomfort of a weeping eye, or the acute agony of a lachrymal abscess, can look upon it lightly. The trouble may be due to a failure of the lower lid to fit closely against the eyeball, and apply its punctum to the proper point. If this can be attained by some simple means, e. g., the cure of a chronic conjunctivitis, well and good. Perhaps an operation may be required for replacement. The immensely larger number of cases, however, are caused by some affection of the nose; if in their incipency they are cured by simple, rational treatment of this organ, and the frequent instillation of argyrol, the practitioner adds much to his reputation and legitimate self-satisfaction. Here again argyrol renders not only great therapeutic, but much prognostic service. Highly diffusive, under normal conditions it penetrates readily into the lachrymal sac, passes down the nasal duct, and is blown freely from the nose. When this is the case we may look, with proper attention to nasal conditions, to an early cure; where this does not soon come about, common humanity imposes the duty of urging and reurging a resort to expert assistance, in the hope of escape from sufferings which the ignorance of the victim does not permit him to realize. The application of very hot cloths often gives great relief in incipient abscess, and it is needless to say that incision should be promptly done when the abscess is pointing, care being taken to puncture below the small ligament which holds the ends of the eyelids to the nasal bone.

This mention of hot applications leads me to speak of their general usefulness in all affections of the eye save those of the conjunctiva, where cold is much more useful and grateful. Poultices are never used about the eye save to hasten destruction. They greatly favor the spread of infection, and by the swelling

they produce hinder the observation and impede the local treatment of the organ. All incisions about the eyelids, save this one for opening lachrymal abscess, which is made parallel to the naso-labial fold, should be made parallel to their free edges. If this be forgotten we may be chagrined to find cicatricial displacements ensue. Like poultices, lead washes should be barred; deposits are too likely to occur upon corneal abrasions which have escaped observation, and there is no dearth of excellent astringents which are free from this danger. Chalazia—the little common lid tumors—can be incised by any one of the least surgical skill. We have only to remember that they are retention cysts, and that thorough curetting, to destroy the sac, must follow incision, or they will recur. Recurrence must not be admitted, however, before the lapse of several weeks, as the clot which replaces the tumor is sometimes but slowly absorbed. Chalazia of the lower lids are best attacked through the conjunctiva, but unruptured chalazia of the upper lid through the skin, for after opening them through the tarsus I have known a rough scar to result, which, grating over the cornea, caused very troublesome chronic irritation. The incision in the skin only gives rise to an imperceptible scar.

That very many headaches of very many types are caused by eye strain is now generally understood; but I do not think the extreme care, patience and thoroughness with which an examination must be made before we can be sure that any given headache is not due or may be due to defective eyes, and that only by such an anxious examination can relief by glasses be given true and sufficient test, is by no means so well understood. I am an uncompromising advocate of the thorough use of a one per cent. solution of atropin repeatedly, several days in succession, in all such examinations in persons under fifty years of age, unless for especial reasons. I must say frankly, however, that many authorities do not agree with me. But in all cases of persistent headache, in which the question is: Shall the unfortunate sufferer find speedy relief, or shall he be doomed to a life marred by drugging and incapacitating spells of pain, all practitioners of candor and experience will agree that the continued use of atropin is necessary. All such must have seen cases of ciliary spasm in persons of middle age, in which only complete and continued paralysis of the accommodation could resolve the haunting doubt of the real nature of the defect. The matter is

one largely of common sense. In the first place, the diagnosis is made quickly and certainly by the use of atropin for several days. If the headache depends on eye strain, then atropin, by paralysing the ciliary muscle and rendering strain impossible, must relieve it. This is true of headache caused by strain of muscular imbalance, for efforts at accurate binocular fixation are abandoned when the accommodation is kept suspended for a time. A headache which does not yield to the daily instillation of one per cent. atropin solution for a week cannot be an eye headache. Practitioners who live at a distance from special assistance can save their patients long, vain journeys, and much expense, by remembering this principle. It is needless to say that physicians of discretion will know how to modify this rule in neurasthenics and hysterics, a class whose weak, unstable nerves, render them especially liable to headache even from minor refractive defects. These may persist in experiencing headache even when under the influence of the cycloplegic. Much skillful treatment by suggestion, and every form of therapeutics may be needed to perfect a cure. But in these all ocular defects—even slight ones—should be corrected, for even a small additional burden should be lifted from the overtaxed nervous system. It is in this way that so many marvelous cures are wrought by glasses; for who can tell which straw it is that is breaking the camel's back. Nor must we forget that the nervous system, by the very terms of its existence, is a habit forming mechanism, and that, if long unrectified, the "headache habit" may be formed, and prove most difficult to break up. The term "headache habit" evidently covering a host of minor pathological details, of which, for the most part, we are entirely ignorant.

But the fact that general nervous disturbance and many headaches are due to lack of co-ordination, imbalances of the orbital muscles, has not as yet become so generally understood. No functional examination of the eyes can now be considered complete which does not comprise an appreciation of the muscle balances, and in all suspicious cases a thorough testing of the statics and dynamics of the orbital muscles. Unless he is assured that this has been done the practitioner should regard with suspicion the results of the examination of his headache patient communicated by the oculist. The manipulation of the test case glasses and the muscle balance tests seem in skilled hands to be so simple that many undereducated

"refractionists" are springing up over our land, and many others in temperament lack the infinite patience required to do this work well. It is, doubtless, the continual reviewing of work of this character, work imperfectly done, which has had much to do in making Dr. Gould, himself an artist both by temperament and study, an extremist on this subject. It is not enough, therefore, to condemn the headache subject or the victim of some obscure "functional" nervous disorder to a hopeless life of semi-invalidism because he "has had his eyes examined." Here, as everywhere in medicine, the question turns on the quality of the examination. Here, too, as elsewhere in medicine, unfortunately, either by design or through sloth, slop shop work may be handed out as a first class article—the chances of detection are so very small, and of exposure practically nil. Upon you, then, gentlemen, in dealing with this class of patients, whom you nearly always, and very properly, see first, rests a grave responsibility. You owe it to those who commit their health into your hands to assure yourselves—not sluggishly to content yourselves with hearsay, like the general—that the ophthalmologist upon whose decision you are to hang this weighty question, is not only well taught but studious; not only of repute among the people of his burg, but among his fellows of the specialty, and above all, not only competent, but honest.

DISCUSSION.

DR. OSCAR DOWLING: I could add nothing more to this subject. I merely want to emphasize what he has said. I ask the doctors present to bear in mind the things to which he has called their attention. There was a man got a cinder in his eye, which was removed a day or two later. The eye became inflamed. Finally he was sent to me, and I found a very large ulcer central in the cornea. I treated him along the line of what Dr. Bruns outlines. It took three months to cure his eye, and I am satisfied if it had been properly treated in the first place all this trouble would have been avoided. The result is that he will suffer some inconvenience throughout life.

There seems to be quite a mistaken idea among practitioners. They expect you to take the patient, treat him, and send him back the same day that they send him to you. They never seem to con-

sider the necessity of examining their eyes, and they frequently become dissatisfied and will not have it done. Some patients have left me and others, and have gone to quacks to get a pair of glasses. The physicians are somewhat to blame in this matter, too. They themselves go and send their families to the optician, because they feel that they do not want to take the time of the oculist, or that they can save the consultation fee. You can rest assured on that point. They are not doing business for nothing. You can usually pay for the spectacles and consultation fee of the oculist, and then save money. I have seen cases where the glasses were not worth five dollars, but the charge was as high as twenty dollars. These things are frequently overlooked by the family physician. If the work is done thoroughly it sometimes requires repeated applications of the atropin, and you should understand that. In sending patients to the oculist, send them with the understanding that it will be necessary to remain a few days to have this work done.

DR. JAMESON: I desire to state that it is a finished production, and I think it is the kind of a paper we need. I believe that it is more in line with the requirements of the members here than any paper I have heard. What we need is something practical that will help the physician who has not all of these facilities at hand. We would like to have a little of the practical knowledge whereby we can relieve them until we can get them down to the higher moguls. We appreciate getting the practical with the theoretical. The physician in the country has some hard propositions, and he has to give his patients relief. You may be called twenty miles through the country to see a fellow who has been suffering with malaria, and you cannot tell whether he wants twenty grains or five grains. You must give plenty, so that if possible he may not have another chill. There is something necessary besides giving him quinin.

DR. SARTOR: In regard to the education of the masses, I only want to say that we ought to get our physicians to realize the importance of having refractions made under proper conditions by competent parties.

DR. CARUTHERS: I do not pretend to discuss this paper because Dr. Bruns has covered the ground so thoroughly. I simply want to call attention to a few instances of mistakes in diagnosis which the general practitioner sometimes makes. Only a few days ago I

saw a patient intensely suffering with neuralgia which she had had for several weeks, had been taking bromide, etc. The minute I looked at this patient I saw that she had a very severe case of iritis. Of course, I got the eye thoroughly dilated with atropin and relieved the neuralgia. In regard to the optician's goods, I have not found that there is a great deal of damage resulting from them. The optician sells the glasses that they can see through best at the time, and they do not get good results, and usually see some one who is competent to fit them, or discard them entirely. I consider it absolutely essential to use atropin in fitting glasses. Every once in a while I have a case come in stating that the family physician has advised the patient not to have atropin used. I refuse to treat them at all unless permitted to do as I think best, as it is impossible to fit glasses correctly without using atropin. I might cite a case I saw recently which the physician had been treating for neuralgia, when it was a case of acute glaucoma. It is therefor very important that the general practitioner be able to distinguish between the common diseases of the eye.

DR. DORTCH: I want to ask a question. You state that in removing a body that a match or toothpick should be used but nothing that is not thoroughly sterilized. Since it is so important to prevent sepsis how about the sterilization of the match or toothpick? How do you do that?

DR. BRUNS: It is taken for granted that the practitioner takes his absorbent cotton with him clean.

The Necessity of a Knowledge of Electro Therapeutics to the General Practitioner of To-Day.

By AMEDEE GRANGER, M. D. New Orleans.

There are at the present day few physicians who would doubt the efficacy of electro-therapeutics when properly applied, and it is greatly to be deplored that medical faculties, whose teachings of therapeutics is limited to pharmacology, are responsible for the fact that only a few members of the profession are really aware of the curative efficacy of electricity and are in a position to set down all the rational indications for the employment of the proper current and their modalities.

The impotence of medicinal agents in a large class of chronic and functional diseases, which are amenable to treatment by electricity or other physical agents, is too well known and recognized to require proofs, and has led the surgeons to devise and attempt surgical operations for their relief and cure; notable examples of this are the Edebohl's operation for chronic interstitial nephritis, and the various surgical treatments for dysmenorrhea.

The day of the different schools of medical therapeutics is passing away, the medical world is more broad-minded and receptive, and to accomplish its aim and object—the relief of suffering humanity—it will make use in the future of all therapeutic agents of known and recognized efficiency, whether they be drugs or physical, and whether they belong to this or that school. What is valuable of every therapy will be employed, what is inferior will be discarded. With time and more general use the limitations of surgery, pharmacology, electricity, etc., will be better known and understood, and a large field of practical utility will remain for each.

All medical colleges in the near future will have a chair on electro-therapeutics and X-rays, and will give to their students that foundation and knowledge which they are forced to obtain to-day through post-graduate instruction. Already the leading colleges in America and Europe have taken that step. Another important step forward made during recent years has been the establishing of electro-therapeutic clinics in all the leading hospitals of the world, and I am proud and glad to add that our own Charity Hospital has a department of electro-therapeutics and X-rays.

The older electro-therapeutists belong to a distinct school of practice; they were enthusiasts, and made use of electricity in all diseased conditions. Should we blame them? Certainly not. The members of all other schools were and some are still just as exclusive. Through their work and enthusiasm electro-physiology, electro-diagnosis and electro-therapeutics have become established and recognized sciences, and the action and uses of the various electrical modalities are better known and understood than those of most drugs of the *materia medica*. Electricity is not employed to-day in a long list of diseases where it was formerly used; on the other hand, since the recent discovery of the currents of high

frequency, its field of usefulness has been enlarged in other directions. I do not believe that electricity should be used, and personally do not make use of it except in those diseases where its action is equal or superior to that of drugs, surgery, and other therapeutic agencies.

The electro-therapeutist should not be the exclusive user of electricity, but just like the other specialists, he should be better trained and equipped, and therefore able to take care of cases which the general practitioner could not handle. The latter, however, and in fact all medical men, should have a knowledge of medical electricity, whether they intend to make use of it or not. If they did, they would find it of value in a large class of diseases, and their field of work would only be limited by the extent of their equipment, facilities and experience. If they did not make use of it, they could still, by their advice, accomplish a great deal of good. Very many less cases would go to the charlatans, and a great many sufferers would be relieved who drag along, going from one physician to another, and lastly begin the long list of patent medicines.

Those who possess a knowledge of the actions and uses of electricity and its modes of application, will find it invaluable in that innumerable army of maladies due to disordered nutrition and metabolism; in all those pathological forms without anatomical substratum which, though being in the last analysis simply functional disturbances, without any gravity in themselves, do not on this account cease to render intolerable the lives of patients so afflicted; and, lastly, in diseases of the nervous system. This includes a long list of diseases—rheumatism, uric acid diathesis, arterio-sclerosis, neuralgias, neuritis, neurasthenia, dysmenorrhea, amenorrhea, etc.—in which the old *materia medica* has been of little or no value. To the above we must add the electrolytic, cataphoric and chemical effects peculiar to the galvanic currents, and which will be found useful in the treatment of ulcerations, endometritis, malignant growths, etc.

Less harm has been done to electro-therapeutics by the quacks, who misuse and abuse electricity, than by members of our own profession, who, having used electricity without any accurate knowledge of its physical and physiological properties, no notions

of technic, no training in its use, and probably employing unreliable apparatus, have not only not obtained good results, but possibly done some harm. These same doctors, who would criticise severely and justly any physician attempting a surgical or gynecological operation without the necessary knowledge and training, say that they have given electricity a trial, and that it has no value other than being a powerful physical agent; that in all cases of imaginary illness its action is little less than wonderful. They go further, and doubt the published results of men who have given years of their lives to the study and practice of this particular physical agent, and especially of those important details of technic of which they know nothing. Is that just and fair? They may have employed electricity in cases in which it was contraindicated; again, they may have used the wrong modality. I know some users of electricity who do not know the difference between a galvanic and a faradic current.

Gentlemen, the medical men who refuse to recognize that electricity is a valuable therapeutic agent, and that it occupies and will continue to occupy an important place in our therapeutics, are responsible for the flourishing condition of the electro-therapeutic quack. The latter are no fools. They make use of a valuable therapeutic agent, and we cannot down them by talk and abuse; nothing good was ever accomplished that way. Some of your patients, whom drugs did not cure, and who are amenable to electrical treatment, to whom you say that electricity would do no good, go to these quacks, get well, and are informed that your animosity against those you term quacks is due not solely to the fact that they advertise, but really to the fact that they get patients away from you by curing them. The latter have no more confidence in your opinion of electricity, and having derived some benefit from the electrical treatment, recommend it to all their suffering acquaintances. You have not only done yourselves an injustice through your ignorance of the value and use of electricity, but to those of your former patients who would otherwise have sought your advice, but knowing already that you would discourage the use of electricity in their case, go to the quack on the recommendation of some friend, without consulting you at all. The charlatan, whether the disease is amenable to electricity or not.

will apply the treatment as long as there is a dollar in it. I have known of instances in which these men treated the last stages of phthisis by the static breeze, and a case of cancer uteri by the static insulation.

If this paper, which opens the new section of electro-therapeutics and X-rays, brings out a free and frank discussion, I will feel very much gratified.

DISCUSSION.

DR. GUSTAV KEITZ, in opening the discussion, spoke as follows:

It would be superfluous for me to endeavor to say anything in addition to Dr. Granger's paper with a view of strengthening his plea for the use of electric currents in general practice. Electro-therapeutics must be studied and practiced in order to be appreciated. In this paper I shall limit myself to a few general remarks and the relation of a few cases.

Electro-therapeutics is a field the extent of which has not yet been fully explored, and while every day adds to our knowledge of its possibilities, we should not forget that its uses and effects are limited, and that it is not a "cure all."

Its greatest enemies are those who were too enthusiastic and too extravagant in their expectations; the disappointment which followed turned the tide of their enthusiasm the other way, and caused them to condemn this wonderful therapeutic agent before they had taken the trouble, time and patience to ascertain any of its possibilities.

Electro-therapeutics requires, first of all, a long and deep theoretical study, commencing with a small work, like Neiswanger's *Electro-Therapeutical Practice*. The next thing in order is a technical dexterity which has to be acquired by earnest and careful practice. The mere purchasing of an apparatus does not convey to the purchaser the necessary skill and knowledge. These must be acquired, for electro-therapeutics is both a science and an art, which, however, as Monell says, "are lost when physicians treat their apparatus as a hand organ, and grind out only the usual mechanical routine; when the static spark is used like a blunderbuss or club; when the possible refinements of galvanic technique are lost in directions to a nurse or to the patient to 'get

a battery and try electricity himself'; when induction coil currents are sought from a common faradic battery, when competent and complete electrodes are regarded as unnecessary, and when the value of scientific instruction is almost wholly ignored."

I should most emphatically warn against the purchasing of cheap apparatus. You will never get more than your money's worth, and not even that when you buy cheap stuff. Only the best apparatus obtainable is worth having. Nothing is more disappointing and aggravating than an apparatus, the good qualities of which exist only on the advertising page of a newspaper, but not in reality.

The notes on the following cases treated successfully, two by X-ray and one by the galvanic current, might prove interesting to you:

CASE 1—CHRONIC CATARRHAL GASTRITIS, TREATED BY X-RAY.

Miss L. C., aet 19 years, a graduate from one of the High Schools. Well developed, menstruates regularly. Had been suffering from dyspepsia for the last 4 or 5 years. Had consulted a number of physicians without getting any relief. Was losing flesh of late. Patient admitted grave errors of diet. Was in the habit of eating at irregular intervals, and with undue haste. Had used ice water constantly; could not get the water too cold. Used to eat ice cream summer and winter. Never used alcohol in any form, not even wine with her meals. Drank tea and coffee moderately.

When she called on me the symptoms were well developed. The appetite was peevish. She had been careful of late to eat more slowly, and to masticate her food well. Was afraid to eat because the ingestion of food caused distress and more or less severe pain. Eructations of gas and regurgitation of food. Vomiting, which had increased in frequency of late, would relieve her pain. Heartburn always after eating; constipation.

First consultation November 27, 1903. Small X-ray tube. Static machine, moderate speed. Tube 8 inches from abdomen, 7½ minutes exposure.

Dec. 4, X-ray, 7 minutes exposure. tube 6 inches from abdomen.

Dec. 11. X-ray, 6 minutes exposure, tube 6 inches from abdomen.

Dec. 18, X-ray. 7 minutes exposure. tube 6 inches, 5 min. & 8 in. 2 minutes.

Jan. 4, 1904. X-ray, 8 minutes exposure, tube 10 inches from abdomen.

Medical Treatment.—Nov. 27, 1903, kasagra, $\frac{3}{4}$ vi, a tablespoonful night and morning.

Dec. 4, 1903. Rx. Podophyllini, gr. i; ext. nucis vom, gr. ii; leptandrini, gr. iii; aloini, gr. vi; ext. colocynth, comp. gr. xii; pepsini Fairch. gr. xxxvi. (M. ft. in pilul. No. xii. D. S., one night and morning, if necessary.)

Jan. 4, 1904. R. sangogen capsules No. 30. S., one after each meal.

The young lady called on me during the Christmas week of 1904 and declared that she is perfectly well. She has followed my advice in regard to diet, the use of ice, etc.

CASE 2—Miss K. S., aet 26 years, 8 mos. Works in tobacco factory; sick about 6½ to 7 years. Began with "a faint feeling in the stomach"; waterbrash, vomiting mucus and water whether she ate or not. Complains of fulness and severe pain in stomach after eating. Sleeplessness; had what she calls "screaming hysterics" at night. Menstruation regular, normal in quantity, but very painful. No food, however light, would agree with her. Felt as if her stomach was held in a vice all the time, so that she suffered from difficulty of breathing at times. Urine clear, but burnt her usually around the menstrual period. Palpitation of heart. Severe headaches and pain in the entire spine about 2 or 3 times a week, the attacks lasting about 20 or 24 hours; bowels irregular, constipation changing with diarrhea. She used to drink hot coffee with a view of allaying the constant pain in her stomach. Was afraid to eat. For a time before consulting me she would drink nothing but water, when she would vomit large quantities of frothy, ropy mucus. Was 17 years old when she took employment in the tobacco factory; two years later (at 19) her sickness began. She ascribes her ailment to the tobacco. Uses no alcohol in any form. Family history negative. All enjoy good health. The foregoing is her own statement. (N. B. Never used ice water.) Had whooping cough in December, 1902.

First consultation February 8, 1905.

I should have mentioned that she was under medical treatment during all these years without obtaining relief; on the contrary, she grew worse.

The only noteworthy occurrence during the treatment which I have outlined below is that she passed a large clot of blood, about 7 inches long and $4\frac{1}{2}$ to 5 inches in diameter, after the fourth or fifth X-ray treatment, by the bowel, and a number of smaller clots during the 48 hours following; she also spat up one mouthful of dark blood. There was no more blood after that, but the pain in the stomach was greatly relieved.

Since I discharged her, June 29, 1905, she feels perfectly well. She has a very healthy color, has gained in weight, but still observes the rules of diet which I have laid down for her at the beginning of my treatment.

TREATMENT—X-RAY, VIBRATORY, STATIC.

Feb. 20, 1905. Static negative, head breeze, 15 minutes

Feb. 24. Static, negative, head breeze, 20 minutes.

March 1. Static, negative, head breeze, 15 minutes.

March 9. Static, negative, head breeze, 15 minutes.

March 9, X-ray, small tube, med. speed; 10 in. dist. fr. abd.
10 min.

March 20, X-ray, small tube, med. speed; 10 in. dist. fr. abd.
10 min.

March 24, Static neg., head breeze, 15 minutes.

March 24, Vibratory massage over stomach, 5 minutes.

March 27, Same treatment as on March 24.

April 8, X-ray, 10 in. distance, 10 minutes, medium speed.

April 15, X-ray, 10 in. distance, 10 minutes, medium speed.

April 20, Vibratory massage over stomach and abdomen, 5 min.

April 25, X-ray, 10 in. dist., 10 minutes, medium speed.

May 5, X-ray. 10 in. dist., 12 minutes, medium speed.

May 25, X-ray, 10 in. dist., 10 minutes, medium speed.

June 6, X-ray, 10 in. dist., 10 minutes, medium speed.

June 29, X-ray. 10 in. dist., 12 minutes, medium speed.

Medical Treatment—Feb. 8, Fly blister (U. S. D.), 4" by 5" over stomach. Sol. adrenalini hydrochl. 3iii , 10 to 12 drops, in water, 3 times daily.

Feb. 13, Diazyme Fair. $\text{}\mathfrak{Z}\text{i}$; ess. peps. Fair., $\text{}\mathfrak{Z}\text{ii}$. A teaspoonful 3 times a day.

Feb. 20, Sangogen capsules No. 20. One night and morning.

March 24, Fly blister, U. S. D, 4" by 5", over stomach.

April 8, Codeinæ sulf.; cocainæ hydrochl., aa, gr. i; ess. pepsin. Fair $\text{}\mathfrak{Z}\text{iii}$ (ft. sol.)—Sig. A teaspoonful 3 times a day, after eating.

April 15, Sangogen capsules, No. 20. One night and morning.

May 12. Hydrogen perox, $\text{}\mathfrak{Z}\text{iii}$. A teaspoonful in a glassful of water, 3 times a day.

June 2, Strychniæ nitratis. gr. $\frac{1}{6}$, Ferri phosphates tribasici, lactopeptini, aa $\text{}\mathfrak{D}\text{ii}$. M. ft. in caps. gelat. No. 20. Sig. One after dinner.

X-ray appears to cause contraction of the capillaries, and thus allay inflammatory action, though Allen says, in his late work on X-ray, etc., p. 345: "Gastritis it is thought by Oudin, Bartholémy and Darrier, has been brought about by intense raying of the abdomen. There was vomiting, diarrhea and severe palpitation of the heart, but no physical signs could be made out. On the other hand Freund, in his very extensive experience, claims never to have observed any gastro-intestinal effects attributable to the rays. Scholtz, likewise, failed to observe digestive disturbances follow even intense raying of the abdomen as to produce necrosis." "Nausea seems to have been at first attributed to prolonged raying by H. C. Drury. It has since been observed quite frequently by others."

I use X-ray very carefully, preferring short exposures of medium intensity, to strong rays of longer duration.

Lack of time prevents me from going into details.

DISCUSSION.

DR. THIBERGE: I want to compliment the doctor upon the excellent judgment he has used in selecting his subject. This is a paper that we can all discuss.

I want to call attention to the importance of bringing a thorough knowledge of electricity when we undertake the treatment of a patient. I think we do the patient an injustice unless we train ourselves before starting the treatment. This implies not only a knowledge of the instrument, but also a great deal of tact

in measuring the quantity of electricity for each patient, for in this treatment it is the patient that is a varying quantity. I have been using the X-ray for four years, and have been forced to recognize the facts that different patients react differently from the same dose.

I also want to call attention to the value of the high frequency current in the treatment of neuralgia. I want to emphasize the good effect of this treatment in neuralgia chiefly in those forms which are called functional. It gives relief, but we should bear in mind that this does not necessarily mean a cure. You must bring the patient up to a good condition. I have had cases of nine months and a year without any recurrence. They are clinically well, though I would not say they are cured. They have passed through intervals of three or four months, and some even a year, without pain. Were it not for the fact that I wish to be conservative, I would call them cured. In eight cases of trifacial neuralgia I have had good results. In ovarian neuralgia I have had some results.

There is this thing to be considered in the use of a high frequency current: Immediately after the first application there is a violent reaction and acute exacerbation of the neuralgia. You should warn your patient of this before for fear they will stop the treatment. I use the static machine with special attachments, and connect the patient directly and not through the ground. You apply it to the diseased area, beginning with five minute treatments and increasing to fifteen minutes. The treatment lasts through about twenty treatments. It is my experience that the pain does not recur.

Another point to which I desire to call attention is that I have been using a tube for X-ray work that is very stationary. I have taken some photographs which I ask the privilege of presenting to you. This is original work of mine, and the object is to make the X-ray a much safer agent.

(Pictures were passed around.)

Report of Four Cases Showing the Necessity of Electricity as a Therapeutic Agent.

By S. C. BARROW, E. S., M. D., Shreveport, La.

In reporting the following cases the main idea in view is to bring before the minds of the profession generally the necessity of a knowledge of electro-therapeutics, and to show without a scientific application of this agent, a vast number of the conditions we meet daily are only partially or not at all relieved.

There has long since been a recognized need for some therapeutic measure, suitable to that large class of cases, both acute and chronic, which resist the purely medicinal agents, and yet in which the use of the knife is unscientific and truly criminal.

While visiting two of the large medical centers of the East last winter I was surprised to note at the various clinics the great number of those applying for relief, who returned to their homes with simply a diagnosis, and the discouraging knowledge that, for them, practically nothing could be done.

On the other hand, it was quite common to find in the surgical departments, more especially the gynecological wards, those for whom there could be, truthfully speaking, nothing done; those who had undergone months and years before the sacrifice of having a partial or complete removal of their pelvic sexual organs, which most probably could have been yet functioning as nature intended.

It is contrary to my wish to discourage the use of any agent, medical or surgical, which has been or might be proven of value. my object being simply to show, by report of cases, that a large class of conditions which are resisting to all known medical and surgical measures, yield readily to electricity with a properly selected current intelligently administered, and the error we make in clinging to the old and disappointing methods, when so effective a one is in reach of us all, and so easily applied.

While the scope of this paper does not include the physiological effects of the various electrical modalities, I would emphasize the fact that, as with all other therapeutic agents, so in electro-therapeutics, without a thorough knowledge of the physiological action of the different currents under varying methods of application, and a clear understanding of the pathological conditions to be treated, it is impossible to secure definite and scientific results.

Case 1. Mr. T., age 40 years. Family history good. Patient always in perfect health up to ten years ago, when he suffered an acute attack of articular rheumatism. Since then he has had frequent attacks, each of which has left him more disabled. Has been treated by a number of physicians, and three or four months during the ten years he has spent at Hot Springs, Ark. He came to me in March, 1905; his elbows, knees, wrists and ankles being very much swollen and painful on pressure, also smaller articulations of hands and feet necessitating the constant use of crutches.

Treatment extended over eight weeks use of static electricity, the Morton Wave Current (Pos. Pole) being applied three to four times weekly over the large joints, followed by the spark to each involved joint. The pain was greatly relieved after first application, and at the expiration of eight weeks all swelling and pain had disappeared, perfect function was re-established in all of the joints, and seven months afterward, the last I saw of him, his health was excellent.

Case 2. L. H., female, age 45. Ceased to menstruate at age of 43. Claims to have been an invalid for the last twenty years, during which time she has suffered constantly with headaches. Complains of vague pains in lower abdomen; on least exertion she becomes very weak and sweats profusely. Very nervous, easily excited and worried. Bowels obstinately constipated, going as long as a week at times without an action. Heart, kidneys and other organs normal.

Treatment consisted in use of heavy static sparks over abdomen, lumbar and sacral spine, which were received with apparent relish. Patient was told to discontinue the use of all medicines, and to make an effort at the same hour each day to have a bowel movement and assuring her that she would be successful. After the second application she was successful, and at the end of three or four weeks they were moving daily, and her headaches, sweats and pains had all disappeared.

Case 3. Female, age 30. Married eight years, never pregnant. Began to menstruate at age of 15, periods have always lasted about one week. the blood passing in clots and very painful. Breasts became swollen and tender, and severe headaches accompany each menstrual period.

Examination shows a retroverted uterus, both ovaries very much enlarged and painful to touch, giving the sensation of a baggy mass in the pelvis. She has been twice dilated and thoroughly curetted, medicinal lines of treatment have also been well tested.

For the first two weeks the constant current was applied every second day, the negative pole in the vagina and positive over abdomen, using from 20 to 40 Mil. The pelvic mass gradually softened, diminished in size, and became less painful. At the end of two weeks I could easily insert a sound to the fundus of the uterus when I began the intra-uterine applications, using the positive pole with a zinc-mercury electrode. Treatment was continued in all about two months. The first menstrual period after beginning treatment was comparatively free from pain, the second entirely so; the third was missed, and each consecutive one for the next nine months, when she delivered a living, healthy child.

Case 4. Female, age 28, married 5 or 6 years. Has had a dysmenorrhea since puberty, which was established at age of 14. Patient dilated and curetted two years ago with no relief. At present there is considerable endometritis; otherwise the pelvic organs are normal. The constant current was applied in this case three times weekly for seven weeks, the positive pole to the cavity of the uterus on a zinc-mercury electrode, the negative over abdomen, using from 25 to 50 mil. The second period after beginning treatment was entirely free from pain; the endometritis was relieved, and six months afterward the patient reported she was menstruating regularly and with no discomfort.

It is interesting to note that in each of the cases reported the lines of treatment usually accepted as proper had been faithfully tried, and the prompt relief afforded by the methods described.

DR. J. BIRNEY GUTHRIE delivered an address on "*Blood Pressure in Yellow Fever*," illustrated by lantern slides.

Orleans Parish Medical Society Proceedings.

President, DR. JOHN J. ARCHINARD.

Secretary, DR. AMEDEE GRANGER.

141 Elk Place, New Orleans.

In Charge of the Publication Committee, DR. AMEDEE GRANGER, *Chairman*.

DR. HOMER J. DUPUY and DR. E. O. TRAHAN.

INAUGURAL MEETING, JANUARY 12, 1907.

DR. C. J. MILLER read the

Address of the Retiring President.

NEW ORLEANS, JANUARY 12, 1907.

To the Officers and Members of the Orleans Parish Medical Society:

GENTLEMEN: In accordance with custom it is expected that, as retiring President, I should submit a brief summary of the year's proceedings, and offer suggestions that in my judgment might be of interest to the Society. Before doing so I feel that my first duty is to thank you for the honor and distinction of presiding over this body for the past year, and to especially express my appreciation for the confidence you have shown in supporting the administration and the uniform courtesy shown me by every member.

My appreciation is also acknowledged for the assistance given by the members of the Board of Directors, who have always shown a willingness to assume a liberal share of the responsibilities and direction of the Society.

In keeping with the few promises of my inaugural remarks, I have endeavored to always bear in mind that of the many needs of the Society, two were absolutely essential to ultimate success, viz., a membership comprising every eligible physician in our parish, and a practical reference library, well indexed and convenient for the members.

Upon the whole, the work of the year along this line is creditable. Forty active members have been elected, 13 have resigned, one has died, and only four were dropped for non-payment of dues.

Our rolls to-day carry the names of 261 members, of which 12 are honorary.

There still remain many practitioners who should and will become members if their interest is enlisted, and I believe that a systematic effort should be made to reach them. It is true that the Society is at last in a position to offer a member more than can be measured in the mere matter of yearly dues; that a physician not a member is really the loser, but in every instance this is not known, and those who are only indifferent should be brought to know what advantages are to be had from membership. There are many who do not seem to realize the immense value of our library, the numerous and expensive reference books, official documents and hundreds of current journals that are added monthly to our collection. We have at last a practical reference library, and every available sum should be expended in completing our files and extending the scope of the literature. It is not out of place here to officially acknowledge the munificence of the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL for its many hundreds of periodicals donated to the library.

The Board of Administrators of the Charity Hospital has also favored us during this year with the custodianship of a valuable collection of books, which has been officially acknowledged.

There has been only one feature of the year's work that might be considered disappointing, viz.: The limited number of scientific contributions and the small number of cases presented for exhibition. This, however, is a perennial shortcoming. It is difficult to understand why such should be possible in a body composed of the busy, earnest, serious workers of the profession who shape public opinion on health and sanitary matters, who direct medical education, and who are making interesting original investigations in every branch of modern medicine. We know our present strength. It has been tested in many directions, but the real, ultimate success depends upon the character of our scientific proceedings. We have spent many years in organization, in acquiring a domicile and preparing for serious work. We have reached that stage where individual effort is expected; in fact, is absolutely necessary to make our Society the clearing house of the profession.

There has been coined a peculiarly appropriate term applicable to citizens of this community who deliberately sacrifice the right to have a voice in the direction of public affairs. I refer to the term "Squaw Man." It has occurred to me that such a term could quite frequently be applied to the indifferent members of our organization who, while having the privilege to attend our meetings, who have invitations to present papers and reports, and who possess the ability to make the proceedings much more interesting and enlightening, never take advantage of the opportunity.

During the year some valuable and extensive investigations were conducted by a commission upon the question of the milk supply of our city. There are several questions of equally great importance to our profession, and this community that could, I believe, be entrusted with profit to committees to outline a practical plan for attack. One of these is the question of public practical education regarding tuberculosis. All over the world this subject has been discussed, until the laity has become thoroughly alive to the dangers of infection; in fact so much alive that the afflicted are being legislated against and shunned.

The practical side of the matter consists in doing as much as is necessary to limit contamination, and as little as possible to inconvenience the infected.

It seems to me a committee could do some splendid work in an educational way in our city just now, when public lectures are being given and the subject is being so greatly agitated, both in and out of the profession. It is generally acknowledged that we are rapidly reaching the limit of operative procedures in malignant disease, and if permanent good is to come of surgical measures that the cases must be seen earlier. The perfection of diagnostic aids and technic still progresses, but a cry has gone up for earlier recognition of the disease. This calls for public education, particularly in regards to uterine cancer, which presents probably the most distressing instances of neglect that the surgeon encounters.

This is not always the fault of the family physician. It is the lack of knowledge on the part of the patient of the dangers and symptoms, and the results of education as introduced by Winter, in Germany, have been so gratifying that every community should take up this important work.

We might mention other subjects, but these are sufficient to remind us of our duties to the community, duties which, if performed, add to the dignity and worth of our organization as an educational factor, while equipping us individually with more measures to combat disease.

Throughout the medical world there exists a growing interest in medical history and biography . One or two medical schools have established courses on medical history, showing the importance of such matters to the profession.

We should foster such a spirit among ourselves, and work to the end that our Society should become the custodian of historical papers, photos, pictures and relics of members of the medical profession, and to encourage the accumulation of those things which constitute the traditions of medicine in Louisiana.

A former President advocated in his retiring address the election of an historian, who would gather and compile matters of interest concerning medical organization and bibliography, certainly a valuable suggestion. The early history of our own organization is only known to some of our older confreres. It should be a matter of record, and it is possible that with the assistance of the members some one of the founders may find it a pleasant pastime to give us the details of its formation.

The reports of the various officers to be presented all show a condition of prosperity.

Our list of active members has increased more than in any previous year, the finances are in a healthy state, the meetings have been well attended, and we enter the new year with promises of many interesting scientific contributions.

In conclusion, I wish to say that I have relied upon the same generous spirit which prompted you to bestow upon me the honor of President to pass over my imperfections, and to aid me in bringing the year to a satisfactory termination. I have not been disappointed, and in introducing the incoming President I can only ask for him similar confidence and support.

DR. JOHN J. ARCHINARD, Incoming President, spoke as follows:
Gentlemen and Friends of the Orleans Parish Medical Society:

I appreciate very much the high compliment you have paid me by honoring me as your President. I full well realize the responsi-

bilities that are incumbent upon one serving in such a capacity. I also understand how difficult it is to please every one.

All men have their few faults, but I in particular have thousands, so if ever I should commit errors, be kind and lenient with me, bearing in mind that those errors are of judgment but not of heart. Remember it is easier to sin than be sinned against.

In order to make this Society a success we must have unity, and to accomplish this end I must have the support and co-operation of each and every one of you. The necessity for harmony and unity of action presents itself now more than ever in the history of our profession.

I know that you must feel and appreciate the fact that there is continuous inflow of incompetent and non-professional men into our midst. To correct these abuses *our only weapon* is a united and combined profession, so I would heartily and earnestly urge and appeal to you to lend your assistance and show your appreciation in my efforts by attending meetings, fraternizing more as members of this association, and asking physicians whom you know are not members, to join its ranks.

Gentlemen, you do not realize, and I dare say some do not appreciate the great influence and power this Society of the Parish of Orleans would wield over the commercial, political and civic bodies of this great city and State if you had but unity. I appeal again to you not to be lukewarm members. Come to our meetings, participate in our deliberations. Let us make the Orleans Parish Medical Society the greatest and most powerful, and also the most scientific body, not only in the United States, but in the world.

Oh, how it makes my blood boil when I hear some one say that he only belongs to the Orleans because otherwise he could not belong to the State and American Medical Associations.

Then others do not come to the Society because it is run by a clique. Stop right here. Let me tell you, gentlemen, that as long as John Archinard has the say you can gamble that no clique will rule him, and if by chance a clique should rule this Society you, and you alone, will be to blame.

How will you be to blame? By not attending our meetings and

our deliberations you will emasculate yourself from this great body, and thereby become squaw men.

Owing to hardships imposed by article four of our By-Laws, many worthy physicians who are eligible in every respect save that having inadvertently allowed themselves to lapse, the accrued dues have increased to such an extent that in their necessitous condition they are unable to pay same. In view thereof I would respectfully recommend for immediate action that this article be repealed, and that all such delinquents be notified that by paying for one quarter they can be reinstated.

I would also recommend that our library be converted into a circulating one. This I believe would be an incentive to one desirous of joining. It would also be a strong argument in soliciting new members, as they would be able by the payment of a small fee to read at home for a limited time any one of the seven thousand volumes that are simply gathering dust and cobwebs upon our shelves—being rarely used under the present plan.

There are yet 80 members of the medical profession of New Orleans eligible to our membership. I would earnestly request each individual member of our organization to constitute himself a committee of one and solicit their application.

This done we, as a united profession, will demonstrate beyond all cavil that in union there is strength.

Finally, gentlemen, let me assure you that the committee will leave no stone unturned in the way towards an earnest and well directed effort to make the Society a success.

We again ask you to co-operate with us and send in a paper or report cases.

I thank you, yes, I thank you for the honor.

THE ANNUAL ORATION WAS DELIVERED BY HIS GRACE, MOST REVEREND JAMES H. BLENK, Archbishop of New Orleans, who spoke as follows:

GENTLEMEN: Gladly responding to the call to address you, I appear here to-night to speak on "The Medical Profession and Its Social Mission."

The Medical Profession and Its Social Mission.

The subject seems to me not inappropriate to the occasion. It may be beyond my powers to treat it adequately, but I shall do the utmost to serve you.

There can be no desire on your part—and I derive great comfort from this reflection—that I stir the air for a while with pleasing fancies, and then bow myself out with the idle satisfaction of having contributed to the relaxation of a holiday merely, but without securing permanent lodgment for a single high ideal, a single lofty purpose enriching and lifting into yet wider spheres of beneficence your splendidly privileged lives.

Gentlemen, I have the profoundest respect and reverence for the medical profession. With mingled feelings of gratitude, admiration and delight, my heart and mind dwell on the nobility, the power and the necessary character of your distinguished calling.

The medical profession is noble in its aim, which is the defense of life in every way; it is noble in spirit, which places it at the service of humanity; it is eminently noble in its achievements, which bring life, comfort and joy into the homes the world over. The power of your profession is a recognized and established world fact, and consists in its countless members of selected ability, rare culture, solid learning, and vast social prestige.

The necessary character of the medical profession is constantly in evidence, for is not the doctor really a part of every home? Is not the profession an important organic part of every city? And gentlemen, you have the singular distinction of representing the highest humane service of science to human life.

Hence, throughout the profession there is an increasingly large, beautiful and admirable record of unselfish service, broad charity,

risks and heroic sacrifices. Words are weak instruments indeed to express the pride and happiness I experience in addressing men of such noble calling and unselfish service. I come to you as an outsider, as a layman from your point of view—yet I claim with you a share in the great glory of being a servant of man too—the spiritual leader. My heart is dominated with the love for my fellow-beings, and the one steadfast aim and purpose of my life is to accomplish their temporal and their eternal welfare. With this sole motive as my guide I am glad to give expression to some views of mine; and counting on your indulgence and good will I shall venture to make some suggestions in the hope of serving the good cause dear to us all.

I.

You are the *defenders of the physical welfare* of the race. All science, all research, all mechanical progress is brought to you. You yourselves add immensely to the rich store of varied knowledge, and with your mind thus advanced and strengthened with the accumulated power of the world's thinking efforts, and with eye as never before penetrating, sure and enlightend by a thousand marvelous appliances, you fight disease with glorious results.

But your restless and eager spirits urge you to find the *causes* of the ills humanity is heir to, to trace them to their innermost citadels, that you may gain the complete mastery over them; to isolate a germ or a bacillus and discover a method of prevention or treatment to insure safety. This explains the great source of wonderment it is for us laymen at any rate, when we get a glimpse of your onward march of progress, and of the brilliant triumphs of surgery and medicine.

Civilization has equipped you with great power, and made you valiant defenders indeed, of the race's physical welfare.

But while this magnificent work was under way—while great medical schools were reared and generously endowed everywhere, and great men thinking and working in them, and while great thinkers outside your ranks were giving you new insight, wider knowledge and the benefit of discoveries, which changed mysteries of nature into triumphant science, *enemies appeared elsewhere*, the race was attacked anew, and God knows, only too slowly have

we awakened. It is an indisputable fact, plainly borne out and eloquently witnessed to by all records of man, that civilization grew as human life became sacred, that it advances as life becomes more sacred, and that it retrogrades as life becomes cheap.

And how cheap has not *industry* made much life to-day! I wish it were not so, I wish I could persuade myself that I am utterly mistaken, for I have a heart to feel, but I have also a mind to understand and see, and when the truth breaks in on me with force and evidence, quite irresistible, I must admit the truth, though it crush and cut my heart to pieces. And so the force and evidence of the truth compels me to say that from the bosom of commercialism, our boast and pride, have come direct, grave dangers to the physical well-being of the race—and you, physicians—you can powerfully aid to give society the protection of which it sorely stands in need.

II.

Society is attacked through (1) *Food and Drugs* by Adulteration, by use of poisons, by deception; it is attacked in (2) *Homes* by massing population, particularly the ignorant and careless, and even the aspiring, who cannot fight against circumstances, in *unsanitary homes* with vile surroundings, filth, bad air; and by the ignorance of parents, whose children die from neglect or starve on food that is of no nutritive value; and (3) through *factories* and *other modern lines of business*, when the laborer is treated as a machine; when he is exposed to dangerous machinery; labors in dangerous trades which shorten life or implant disease; works day by day in unsanitary surroundings; when men are worked under too severe a strain, and as a consequence are exhausted young or driven to drink; and (4) through *premature work of children*, through *hard labor by girls*, future mothers, and by actual mothers who can give to their offspring no heritage of full and unexhausted health and bloom of life.

Thus there is an appalling, deliberate, systematic attack on the physical welfare of the race, and this attack is made and carried on in the name of freedom of contract, personal liberty, economic progress, and goodness knows what not.

Undoubtedly you, yourselves, in your practice, have met count-

less cases, illustrating every point referred to. I appeal to that knowledge of facts which you possess, and to the instinct of human love, which so honors your profession. I do not presume to teach where I should learn, nor to confirm by statistics or tables, what you must know so well. The facts are these: The physical welfare of the race, while gaining wonderfully in security through your distinguished services and noble consecration, has been attacked with appalling success in, and through, *food and drugs, unsanitary homes, factories*; that is, in aspects of labor of *men and women and children*.

It is well to guard against exaggeration and to see progress; and therefore, it is just, as well as gratifying, to notice that we have pure food laws, and executive officers who are theoretically supposed to enforce them; how far they may be successful in their practical enforcement I am not prepared to state, but I trust that much good is accomplished. We have sanitary ordinances (by patient research they can all be found somewhere) and health departments, which do excellent work. We have factory inspection, which no doubt will yield good results. As far as I am informed, we have no labor laws worth mentioning. And so it still remains true that very grave problems remain.

Should any poor mother be ignorant of food values? Should any mother purchase food that has no nutritive value? Should any infant starve on worthless milk, or be poisoned by "embalmed" milk? Should any city tolerate an unsanitary home or section of them? Should any laborer be old at thirty-five, exhausted at forty-five? Should children be stunted by excessive labor, or mothers go to the factory?

These are vast, complex questions, not to be answered in a day, nor a year, but their clamor for answer is the tragedy of the century.

III.

The *cause* of these problems is mainly greed; some one is willing to make money out of human life. The *condition* that makes it possible is the *ignorance* and the *indifference* of the public and the *helplessness* of the sufferers. What is needed, in addition to what may have been done already by agitation and by law is *knowledge of facts, appeal to humanity's heart, organization of sentiment,*

leadership, and gentlemen of the medical profession, where can we look, except to you, the consecrated guardians of the physical welfare of your race!

In your minds is stored the *knowledge*, in your hearts is found the *impulse* of service; in the past of your profession is found inspiration equal to the work. In behalf of the sufferers, of the victims, whose name is legion, I appeal to you, to take over professionally this wider care of physical well-being.

IV.

Let me suggest in a few words what I have in mind. Give us facts. Let the public know, in any manner which the ethics of your profession approves, all facts bearing on the menaces to physical well-being. Facts of disease and death, pain and sorrow, due to adulterated food, to unsanitary homes, to premature or excessive labor. Instruct us on the processes we should follow, that we may avoid exaggeration, as well as indifference. In your writing, in your lecturing, in homes to which you go in your practice, labor to awaken public opinion to the gravity of these problems. Organize public opinion and lead it. Press law makers as well as law breakers to see humanity's demands.

You will find religion a willing coadjutor. The ministry and medicine can join hearts and hands in the role of the Good Samaritan; humanity in the person of the poor has fallen among robbers. Be helpful. be brave, thousands are turning to you for succor and rescue. The public will follow and acclaim you; the press will aid and strengthen you. and the overwhelming majority in business will bless your work.

As a spiritual guide, to whose hands many heavy cares are committed, the physical well-being of society is dear to me. The church that developed asylums, hospitals and agencies for charity, throughout the centuries, and to-day encourages her tens of thousands of chosen souls to consecrate themselves to the care of orphans and aged, poor and sick, feels the deepest concern in the wider sanitary interests. She would see clean, pure homes everywhere, strong, healthy children, mothers and girls shielded against ills due to premature work, over-exertion, exhausting labor; and men hale and hardy, respectable and respected, in whatever

walk of life they be, the glory of our country, and true sons of the living God.

A Christian instinct leads me to appeal to you in your great power and consecration, and this instinct is strengthened by the conviction that you, best of all as a body, can do the work required.

Give then, gentlemen of the medical profession, the public facts, so that there be neither exaggeration nor indifference. Give the public inspiration by sounding your appeals throughout the city, so that it grow fairer than the fairest, and the city beautiful par excellence.

Give the public organization, so that public opinion may work into law, into the factory, into the home.

Give the public leadership, so that the day dreams of all the noble women and brave men of the Southland's Queen may turn into glorious realization.

Details I must need leave to you. I make only a few suggestions, which spring both out of my deep conviction that the physical welfare of society is neglected in the ways stated, and out of my own sense of indefiniteness, not knowing what to do or how to act.

Your meeting has given me the opportunity to speak vaguely and incompletely, it is true, but yet with a love of humanity that knows no waning, and with a profound faith in the distinguished profession which you so worthily and honorably represent.

N. O. Medical and Surgical Journal

Editorial Department.

CHAS. CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

Mosquitoes and Again Mosquitoes.

For several years before our outbreak of 1905 we were frequently calling attention to the imperative necessity for the destruction of mosquitoes in New Orleans, in Louisiana, in the whole South. Little heed was paid to these warnings and those of our then local health officer. The resulting epidemic is too fresh in the memory to need recalling, but the lessons taught must be remembered in order that practical results may follow the warning we began sounding last month.

The present city health officer, Dr. O'Reilley, has realized the necessity for action, and is to be commended for the step he has already taken to enforce the screening ordinance. He must not swerve from his purpose, although the task is a huge one, demanding intelligence and tenacity of purpose. The members of the local profession must uphold him in every way, and keep up a quiet crusade in aid of his campaign.

Other things must be done, however, in order that we may be rid of other mosquitoes which, although not proved guilty, may well be capable of transmitting other diseases. Our gutters and ditches *must* have an occasional flushing and cleaning. The culex mosquito is taking advantage of the stagnant water therein, and of favorable weather conditions, to multiply prodigiously, much to the general annoyance, not to say more. Besides, it is recognized that when the stegomyia cannot find perfectly clear water on which to deposit her eggs she will seek other, hence we cannot be positive that there is no danger from municipal neglect of drains. Cesspools, vases in cemeteries, etc., are other sources of danger.

It is not sufficient for the people of this city to do what is necessary; physicians of the whole State and of the South should arouse their people in time to the requirements of the hour. This is not being alarmists, this should not beget apprehension. The proper course is merely putting into effect the ounce of prevention which is so much better than tons of cure.

The exclusion of infected persons is none the less advisable and proper, and we must look to our quarantine officials for that sort of protection, but we must be so prepared that, should any lapse occur from weakness at the weakest link, there yet would be no danger to our community, our State, or our land.

Our slogan must still remain, down with the mosquito.

The Laws of Civilization.

The excavated ruins of the buried cities of volcanic Italy have furnished memorable evidences of an advanced civilization. Art and statecraft vied with sanitary achievement. Yet in the very temples dedicated to the origin of their being have been found monuments to a vicious existence, pervert to the highest human instincts, and evidence of an obliquity concomitant with the highest planes of community and urban life.

The demand of the human race is for higher and higher achievement, until in the history of the individual, of the community, or of the nation and the race, the balance of ideals is lost and the perversion of some is the result.

A primitive race is slow to accept the ideals and the propensities of a cultured people, and if such are forced upon them they may accept them in part only, preserving instinctively the grosser qualities, as dormant and inherent in their caste and type.

Much has been written and exploited regarding the negro in modern society. His sex crimes grow awfully in multiplied numbers, and the explanation is ready to the hand of the newspaper opportunist or the lay apologist. But the seat of the evil lies in the fundamental condition of society and the natural laws of civilization. Perversion is common even in animals removed from their original environment, and the mental state and balance of

the negro is not much advanced or removed from the lower mammalian types. The forced conditions attendant upon their removal to a *newer* plane of life, under higher social conditions, in a luxurious civilization, have all provoked a mental exaltation which has created morbid effects with disastrous results for the negro race. The attempt to regulate irregular sex relations between races of different organic types cannot succeed for many years to come; the education of a savage people is not possible in two or three generations; the substitute of mob law for the protracted court procedures solves the case which presents at the instant, but fails in precept and example; so it remains that no reasonable relief has as yet been suggested for the remedy of an evil growing in its horrors and in its prophecies for the future.

The laws of civilization are, after all, the laws of Nature, and command a process of evolution for their fulfillment, and we cannot fail to remark that the exponent of this process, as applied to the negro, now carries much of its own solution.

Here in New Orleans the mortality of the negro is nearly ninety per cent. higher than among the Caucasian race; the diseases to which the negro falls most easily the victim are tuberculosis and its congener, syphilis, with the many conditions in its train.

Both the perversion in sex ideas and the ready surrender to disease are outgrowths of the same inability of the inferior race to meet the demands upon it. Time alone must bear the burden of a final solution in the survival or the subjection of morbid traits, which the very laws of heredity count as foreign to a perfect or a stronger type.

The enactment of laws and the effective enforcement may aid the final solution, but education and the moral force of patriotism, individual sense of pride or shame, and the ultimate respect for the womanhood of the white race, are paramount in the field work for the fight against the monster of a diseased and perverted race, burdened upon our civilization.

Abstracts, Extracts and Miscellany.

Department of Surgery.

In Charge of DR. F. W. PARHAM, Assisted by DR. F. LARUE, New Orleans.

THE LATERAL CERVICAL INCISION FOR THE REMOVAL OF FOREIGN BODIES FROM THE ESOPHAGUS, WITHOUT OPENING THE LATTER.—Prof. Felix Franke, of the Deaconesses' Hospital, in Brunswick, relates in *Centralblatt für Chir.* an interesting case in which he was able to remove a good-sized dental plate from the esophagus below the level of the thyroid cartilage with the aid of an external incision down to but not into the esophagus. The man, after a hard day's work had swallowed during heavy sleep a plate measuring 3.5 c. m by 4 c. m. X-ray examination showed it just below the level of the larynx, but it could not be grasped with the laryngeal forceps. Under chloroform a lateral incision was made and the esophagus exposed, but not opened. It was now easy to feel the foreign body and to grasp it between two fingers. It was not at all difficult to manipulate it gradually upward until it could be grasped from the pharynx. The wound was closed without drain and healed *per primam*. He was able to be at home two days after the operation.

Franke was astonished on looking up the literature of the subject to find that only two other cases had been similarly treated, although among the 366 cases of esophagotomy for the removal of foreign bodies, collected by Naumann, quite a number must have been encountered in which it would have been easy and with much better result to adopt the procedure here described. The two cases referred to were reported by Kramer in *Centralblatt für Chir.*, 1904, No. 50. Both were successful.

Naumann has gone very thoroughly into the subject of esophagotomy for removal of foreign bodies (*Deutsche Zeitschrift für Chir.*, Band 83). The result of opening the esophagus is unfortunate in some cases where the body might have been removed without opening the tube, and practically without risk. Hence,

Franke urges strongly, and this was the chief object of the present communication, that after exposing the esophagus, before incising it, an attempt should be made to ascertain the mobility of the foreign body and to try cautiously to push it up, where it may be grasped with a forceps from the mouth. It may not safely be done where the body is too low, or has been too long in place, making efforts to dislodge it risky, but in many cases it may be safely and expeditiously done.

THE NATURE OF SHOCK: IS IT VASOMOTOR PARALYSIS OR CARDIAC SPASM?—Boise, of Grand Rapids, Michigan, read recently before the New York Obstetrical Society (*American Journal of Obstetrics*) a paper on shock, in which he took serious issue with Crile in his interpretation of the latter's notable experiments on blood pressure.

Boise bases his arguments upon these same investigations of Crile's, asserting, whilst not controverting the facts of Crile, that he has misinterpreted these facts and drawn the wrong conclusions.

The issue may be fairly stated thus: Crile says, "Surgical shock is exhaustion of the vasomotor center," and asserts that neither the heart muscle nor the cardiac center are otherwise than secondarily affected.

Boise, on the other hand, endeavors to demonstrate "that the essential cause of shock is excessive sympathetic irritation, manifested mainly by a tonic contraction of the heart and arteries."

The issue is thus clearly joined, the testimony collected is substantially endorsed and accepted by both parties to the issue, and yet the conclusions are diametrically opposed. We shall not attempt at this time nor in this place to assume the functions of the judge and jury in rendering a verdict. We shall try only to give briefly Boise's point of view, hoping at some future time to take the matter up more seriously in an endeavor to arrive at some just conclusion. When one remembers last year the confusion of ideas as exemplified in the papers of Mummery and Malcolm, Sheen and others in *The Lancet*, one must feel the almost hopeless state of the surgeon when actually confronted on the operating table with a severe case of shock, because if due to vasomotor paralysis the treatment must be directly opposed to that demanded if caused by cardiac spasm.

Boise's contention, then, is that all the phenomena of shock are dependent directly on irritation of the sympathetic, the accelerator or augmentor nerves of the heart causing cardio-spasm, irritation of the vasomotor centers causing contraction and emptying of the arteries and the filling of the veins, irritation of the secretory nerves causing the profuse perspiration, the diminished secretion of urine being dependent directly upon the diminished supply of blood to the kidneys, the relaxation of sphincters and involuntary discharges being due in the first place to increased peristalsis from stimulation of the sympathetic, and in the second place to the cerebro-spinal anemia (from arterial spasm) causing loss of sphincteric control. Boise goes fully into the discussion of Crile's data, giving his argument in detail, supported by some independent experiments of his own. The whole argument is worthy of study, because if the conclusions be adopted our treatment of shock must be changed. Boise accepts this inevitable result, logically, by contending that heart and sympathetic sedatives, like *veratrum viride*, and not stimulants, like *strychnin*, are indicated in the treatment of shock.

Department of Therapeutics and Pharmacology.

In Charge of DR. J. A. STORCK and DR. J. T. HALSEY, New Orleans.

SCOPOLAMIN-MORPHIN ANESTHESIA.—H. C. Wood, Jr. (*American Medicine*, Dec.. '06) sounds a timely note of warning as to the danger of this method of inducing anesthesia. He emphasizes the identity of scopolamin with hyoscin, a drug whose dangerous properties are well known to all who have used it extensively. *A priori* reasoning from a knowledge of physiological actions of morphin and of scopolamin indicate this is a dangerous combination, and clinical results are in accordance.

Wood has collected from the original reports 1,988 cases where this method of inducing anesthesia was employed. In nearly one-half of these cases the anesthesia is reported as "unsatisfactory." In twenty-three cases death resulted. Eliminating all doubtful

cases, nine deaths remain which must be attributed to the anesthetic, giving a death rate of more than four per thousand.

Wood concludes as follows: "In view of the facts, that the combination of morphin and scopolamin for the production of surgical anesthesia is scientifically irrational, and has yielded a mortality of over 4 per 1,000, and that in 60% of the cases the anesthesia has been unsatisfactory, we think it must be a very bold or a very ignorant surgeon who will persist in its use. (J. T. H.)

ALCOHOL IN DIABETES.—Benedict and Török (*Zeits. f. Kl. Med.*, Vol. 60, p. 329) as a result of clinical experiments, conclude that in many severe cases of diabetes alcohol is of great value, lessening the proteid combustion and diminishing the amounts of "acetone bodies" produced. They recommend its careful prescribing in amounts ranging from one to three ounces daily, noting carefully the effects and controlling the amount used. As contra indications they mention albuminura, neuritis, arteriosclerosis, also the diabetes of children. (J. T. H.)

SPRUE TREATED BY STRAWBERRIES.—In the *Lancet* of March 28, 1903, Dr. Edward H. Young reported a serious case of sprue, or psilosis, which he had successfully treated by the addition of strawberries to his patient's diet. In the *Lancet* of Dec. 15, 1906, Dr. Maurice F. Squire reports a case of a man, aged 29, also treated by means of the addition of strawberries to his diet. He writes: "The patient was of a gluttonous nature and difficult to manage as regards his diet. He became very restive under an exclusive milk diet under which he had improved. On adding bread, butter and eggs his stools soon returned to their previously grey liquid and yeasty state; he rapidly lost flesh, and the ulcers reappeared on the tongue.

"He was again put on a strict milk diet with a similar result as regards the improvement, the grumbling as he got stronger, and the relapse on increasing the diet.

"During the winter and spring following different drugs and foods were tried, some with temporary benefit, but each relapse left him weaker than the previous one. He was weighed several times, and he never scaled more than 81 pounds, which was about

half his normal weight. Having heard of the strawberry treatment for sprue I determined to try it as a last resource, and on June 8 last I ordered him one pound of strawberries per diem in conjunction with the diet he had been taking for some weeks previously, consisting of three pints of milk, a pint of beef tea, bread and margarine, milk budding, and an egg as the daily allowance, and all drugs were stopped.

"On the 16th the improvement was marked; he had regained sufficient strength to be put upon the scales, and he weighed 70 pounds, his stools were formed, but unusually offensive and of a which had been present on the sides of his tongue had healed. I increased his daily rations of strawberries to two pounds, and on July 2 to three pounds, when he weighed 81 pounds, though his stools were still clay colored. On the 20th he weighed 96 pounds his stools were formed, but unusually offensive and of a light brown color. He was feeling better than he had done since the commencement of his illness, and I added some boiled fish to his diet.

"On the 31st some edema of the feet and legs appeared, associated with irregularity of the pulse, but the cardiac weakness was corrected in a few weeks by small doses of digitalis and squills, and in other respects his progress towards recovery was maintained. The supply of strawberries rapidly deteriorated owing to the hot dry weather, and on August 6 I discontinued them; he then weighed 120 pounds, and his stools were normal in consistence, color and frequency.

"On Sept. 4 he was put on the ordinary meat diet of the infirmary, and he took his discharge on Oct. 9 looking strong and healthy, with a good color and weighing 150 pounds, which he stated was within a few pounds of his usual weight.

"This case was an extremely interesting one in that it demonstrated the usual impotency of drugs to effect the course of sprue, and also the marked benefit derived from an exclusive milk diet, which I think might have yielded a satisfactory result if the patient could have been induced to submit to it for a longer period. Then comes the question of the strawberries, and from the facts narrated above it is impossible to come to any other conclusion

than that they were the curative agent in this instance; they seem to have supplied something which enabled the alimentary canal to digest and assimilate the nourishment provided in the diet, but beyond that I am unable to discuss the chemistry of the subject.

"Two cases are obviously insufficient evidence upon which to dogmatise, but these two remarkable instances point to the conclusion that a case of sprue need not be considered hopeless until strawberries have been tried." (J. A. S.)

SANTYL IN THE TREATMENT OF GONORRHEA.—Santyl is the trade name of the salicylic ester of the oil of santal. It is an almost tasteless and odorless oil, of pale yellow color. It contains 60 per cent. of santalol, in chemical combination with salicylic acid. In its unaltered state it is no more irritating than olive oil, and is only split up into its components after it has left the stomach. This process is so slow that no renal pain will appear, and the breath of the patient will not reveal the drug. In healthy individuals the excretion by way of the urine commences in about one hour, and lasts for about 24 hours. Even with an empty stomach there is no gastric disturbance.

The conclusions of Vieth and Ehrmann, from their clinical experience with a number of patients, the majority of which suffered from gonorrheal urethritis, caused me to try "Santyl" in about 50 cases. In the meantime R. Kaufmann, of Frankfurt a/m., has reported 45 cases, and H. Bottstein, of Hamburg, 60 cases, treated with this drug.

Fifty of the cases treated were acute, and five of these in women. Particular attention was paid to the action of the drug upon the gastrointestinal tract and kidneys, as well as to its general therapeutic efficacy.

The mode of administration was always in the form of drops, 20 being given three times a day after meals. Even in those cases where the drug was purposely given for an extended period before the meals there was no gastric pain, nausea, eructation, vomiting, colic or diarrhoea. All patients confirmed the almost complete absence of odor and taste.

Renal irritation was not seen in a single instance. Several patients who complained of pain in the renal region after the use of pure santalol or mixtures of santalol with other balsams, could

take santyl for a long time without the slightest disturbance. That unadulterated preparations of santal can irritate the kidneys, as observed by Vieth and Ehrmann, while with santyl not a single instance was recorded.—Dr. Leopold Lilienthal in *The American Journal of Urology*. (J. A. S.)

TREATMENT OF TUMORS WITH GLYCOLYTIC FERMENTS.—It has been found that there is a large amount of glycogen in certain malignant tumors, and Odier (*Presse Médicale*. No. 52) reports experiments performed in the treatment of such tumors in animals with injections of glycolytic ferments and pancreatic juice. In some cases the tumor disappeared entirely, in others no effect was noted. No attempts to treat tumors in man by this method have yet been made.—*The Therapeutic Gazette*. (J. A. S.)

A NORMAL DIET.—A point of great interest is that of the proper proportion in which the individual foodstuffs should be put together in making up a ration.

Voit defines a ration as a well-tasting mixture of foodstuffs in proper quantity and in such a proportion as will least burden the organism. What is the proper proportion?

Voit gives the following ration for the use of an average laborer, such as a soldier in a garrison—that is, for a man at work from eight to ten hours a day: Proteid, 118 grams; carbohydrates, 500 grams; fat, 56 grams. This diet contains 3,055 calories.

The allowance of 118 grams of proteid has provoked much discussion. The original figures were obtained by Voit by averaging the proteid metabolism of many laboring men. This requirement of proteid was therefore obtained by the statistical method, which simply showed what the average laborer in habit destroyed. For the same class of artisan the diet given by Rubner calls for 127 grams of proteid; by Atwater, 125 grams; and Lichtenfelt confirms Voit's average as being the quantity of proteid taken by laborers in northern Italy.

For men at hard labor, such as soldiers in the field, even higher quantities of proteid are commended—by Voit, 145 grams; by Rubner, 165 grams, by Atwater, 150 grams. These figures again are based on statistics. Quite recently Woods and Mansfield found that the average proteid in the ration of fifty lumbermen is 164.1 grams.

In striking contrast to this Siven at the age of thirty-one and a half years, and weighing 65 kilograms, finds he can maintain himself in nitrogen equilibrium for a short period on a diet containing between 4 and 5 grams of nitrogen, or 25 to 31 grams of proteid. In fact, in one experiment the food contained 4 grams of nitrogen, of which 2.4 grams only were in 15.4 grams of true proteid, and the balance in amino acids and other nitrogenous non-proteid matter of vegetable origin. Here nitrogen equilibrium was nearly attained, the nitrogen ingested being 4. and that excreted 4.28 grams. The food given, which was rich in carbohydrates, contained 2,717 calories, or 43 calories per kilogram, and the total metabolism as estimated by respiration experiments indicated a heat production of 2,082, or 32 calories per kilogram. Here was practically nitrogen equilibrium maintained at the minimum level, and a low total metabolism which was largely at the expense of carbohydrates.

Underfed or overfed individuals may alike become objects of commiseration and proper subjects for rehabilitation.—Graham Lusk (*The Elements of the Science of Nutrition*). (J. A. S.)

Department of Ear, Nose and Throat.

In Charge of A. W. deRoaldes, M. D., and Gordon King, M. D.
New Orleans.

ALYPIN, A NEW LOCAL ANESTHETIC IN RHINO-LARYNGOLOGY. Among the numerous substitutes suggested for cocain in recent years alypin, a derivative of glycerin, seems to be the most promising, according to the opinions of Raoult and Pillement, who have reported their experience with this new anesthetic. Alypin is a white crystalline powder, very soluble in water, with local anesthetic properties almost as great as those of cocain, and without any apparent toxic effect. When a concentrated solution is applied to the mucous membrane complete anesthesia of the part supervenes in about three minutes, minus the vaso-constrictor effect which is characteristic of cocain. This is of advantage in

certain operations, such as removal of the ends of a turbinate, etc., and when the contrary effect is desired a small percentage of adrenalin may be added. The authors observed that hemorrhage was less than after cocain, and no toxic effects were ever observed in any case.—*Archives Internationales de Larygologie*.

THE CURE OF CHRONIC SUPPURATIVE OTTITIS MEDIA WITHOUT REMOVAL OF THE DRUM OR OSSICLES OR LOSS OF HEARING. Charles J. Heath, F. R. C. S., in the *Lancet* of August 11 gives a most interesting report on the result of his study of the preservation of hearing in the radical ear operations. In perfecting the technic of the radical operation, and carrying out the principle of thoroughness in eradicating the diseased parts, too little attention has heretofore been given to the effect on the hearing, and considerable loss of hearing is generally considered a frequent and unavoidable sequel of surgical intervention. The plan of procedure outlined by Heath has for its object preservation of the middle ear mechanism, while at the same time removing the suppuration.

Instead of curetting out the tympanum as is usually done in the radical operation, the author, after cleansing out the mastoid antrum enlarges the additus and endeavors to secure thorough drainage through this canal, the eustachian tube and the perforated tympanic membrane. By carrying out his technic carefully the operator can obtain an improvement in the hearing instead of injuring it, and the example set by Heath along this line is well worthy of emulation. Ten interesting cases are recorded, showing the result of treatment from a functional point of view.

Miscellany.

Parisian Medical Gossip.

Translated by DR. THOMAS C. MINOR, Cincinnati, Ohio.

MEDICAL ASSISTANCE IN ANTIQUITY.—We extract the following from the "*Progres Medical*." The new law regarding the assistance of the old, infirm and destitute, calls attention to the questions imposed for so many years on physicians and

philanthropists. Need we call on the work of Gros Mayreveille (*L' assistance medicale dans l'antiquite*) for the description given us by Sophocles in his "Oedipus" as to the plague that invaded Attica shortly before the death of Pericles? The Athenians relate a pleasant legend of the medical corps voting a golden crown for Hippocrates, and the state paying his expenses ever after. Why did Littré endeavor to destroy this legend, inasmuch as his profession has seldom been given crowns and honors by an ever avaricious public? Greek legislation, besides, resolved in the affirmative in that vow that a physician recently made to the Tuberculosis Congress to the gentleman who wished remuneration from the state. These cities of Greece, where abode health and beauty, had public physicians, and meantime Xenophon, in his "*memorables*," leaves us troubled in spirit when he writes as follows regarding a candidate in the public employ: "Certain it is, O! Athenians, I have never learned the medical art and never had a doctor to serve me as preceptor; my great preoccupation has always been, in fact, not only to avoid medical teaching, but even to appear as not knowing the healing art: yet I beg you to give me the employment I desire, i. e., that of City Physician, and the public can then employ me at its own peril and risk." In those days the city doctor was made by election. Some cities, it is true, had doctors by direct appointment; in this case the citizens having such a physician clubbed together to pay the salary. He was lodged at the expense of the corporation; he was given a large house with open doors and plenty of light. He had an operating room and an apartment where he mixed his medicines. He housed all patients operated on, and also the poor who had no homes. He had paid assistants and slave servants, also pupils who made a contract for their services. At the end of his engagement his pupils took the medical oath and were thereafter considered physicians. The public physician was forbidden to treat women.

At Rome medicine preserved its private functions until the coming of Julius Caesar. Most of the doctors then practicing in Rome were foreigners and freed slaves. As a rule all doctors were rather held in contempt. Julius Caesar gave them all citizenship and the freedom of Rome. Physicians were placed in two classes; these were palace doctors and public healers. They not only had

physicians but Vestal Virgins, the latter being somewhat like the modern trained nurse, at times. Very soon medical men gained public respect and more authority. Some of them went into politics then, even as now, becoming mayors and other municipal officers. A decree of Antonius gave all small towns five city physicians; the larger towns were allowed ten. They were elected by the municipal council and had to give all their time to attending the poor. Physicians, their wives and children, did not have to pay taxes. Candidates for city physician positions soon grew very numerous and in time their medical merits for places were decided by seven doctors, members of a medical school.

Aesculapius, it is claimed, founded the first school of medicine; his pupils visited the sick with him, the only true method of clinical teaching. Under Augustus the instruction of the real "*Schola Medicarum*" was instituted. Tiberius perpetuated this school, and the students paid the professors fees for instruction in the surgical and healing arts.

Augustus also instituted the order of army surgeons. Afterwards medical associations were organized and doctors were appointed to public gymnasiums and the schools of gladiators.

The dignity of the physician had grown so great, and he was now held in such high esteem that even Seneca wrote: "My physician evinces more solicitude for me than his profession obliges him. He is ever uneasy when I go out, always quick in answering my summons at critical moments. The most arduous service never finds him weary or impatient. He cannot hear me groan without suffering from emotions." Seneca's doctor does not resemble the modern physician who makes a dive for a patient's appendix on the *first* utterance of a groan.

ALWAYS CALOMEL OINTMENT.—Doctor Beliard, in the *Journal de Medicine ae Paris*, indulges in a sarcastic feuilleton against Metchnikoff, the immortal, who cures old age with curdled milk. Speaking of calomel ointment, he remarks: "The subject is delicious, and we recall it with pleasure. In the full glare of the twentieth century; not among the American Indians nor the African Hottentots, but in our very scientific Paris, the taste for the marvelous remains, and, every time the medical pontiff Metchnikoff

opens his mouth the public press, ever given to quack "ads," emits a wild huzzah of another triumph for French medicine.

After his magnificent discovery that curdled milk was the true elixir of life, and his protestation that those who lived on anything but rich milk shortened their lives, and his affirmation that those who were old could be made young by an exclusive sour milk diet, an affirmation for which he was crowned by the French Academy, Metchnikoff now claims that he has discovered an anti-syphilitic in mercury! The excitement this old remedy, newly discovered, it appears, in Paris, has awakened in French medicinal circles is unbounded. It takes infinite gall for a modern doctor to make this claim for the only real specific outside of sulphurs, for a specific malady. It was Metchnikoff who once claimed that hot iron would prevent baldness, even if it did curl the hair.

Metchnikoff is a great medical pontiff against whom the gates of Hell shall not prevail; he claims infallibility in all lines of his proprietary remedies.

Metchnikoff took a young man full of heroism and inoculated the youth with syphilis. Then he used calomel ointment over the abrasion made—no chancre afterwards appeared, it is claimed. Therefore, the Pasteur Institute chanted the praises, colored by "ads" in the Paris papers, of the new discovery.

Now, calomel ointment, as a preventive of syphilis, is hailed as a universal panacea. Can one experiment prove the utility of the remedy? Can one believe in the activity of the virus used? When one hundred well authenticated experimental cases, duly certified, prove the truth of Metchnikoff's assertions, it will be time to take an interest in this new claim. Metchnikoff, as usual, is hasty in drawing his conclusions. There is no proof even in this one experimental case, that the young man previously experimented on had not been a sufferer before of "French" pox. Mercury is not new in medicine; it was known as the best remedy for syphilis many decades before Metchnikoff was born. Great are the public medical benefactors—the inventors of new serums and specific—even in the twentieth, as in the nineteenth century—the age of greater medical humbuggery—fleas, flies, lice, bedbugs and other hosts of infectious diseases.

Louisiana State Medical Society Notes.

In Charge of DR. P. L. THIBAUT, Secretary, 141 Elk Place.

NEXT MEETING: NEW ORLEANS, MAY 14, 15, 16, 1907.

OFFICERS—President, Dr. Henry Dickson Bruns, New Orleans; First Vice-President, Dr. Charles McVea, Baton Rouge; Second Vice-President, Dr. George F. Wilson, Bienville; Third Vice-President, Dr. A. J. Perkins, Lake Charles; Secretary, Dr. P. L. Thibaut, New Orleans; Treasurer, Dr. Jules Lazard, 830 Canal Street, New Orleans.

COUNCILLORS—Chairman, Dr. E. J. Graner, 2d Cong. Dist., New Orleans; Secretary, Dr. J. L. Scales, 4th Cong. Dist., Alden Bridge, La.; Dr. P. E. Archinard, 1st Cong. Dist., New Orleans; Dr. J. Wofford Sanders, 3d Cong. Dist., New Iberia, La.; Dr. S. L. White, 5th Cong. Dist., Ruston, La.; Dr. C. M. Sivan, 6th Cong. Dist., Greensburg, La.; Dr. C. A. Gardiner, 7th Cong. Dist., Sunset, La.

THE BIENVILLE PARISH MEDICAL SOCIETY HELD ITS ANNUAL MEETING at Gibbs, La., on January 8, 1907. The following officers were elected: Dr. S. I. Colvin, President; Dr. T. H. Pennington, of Arcadia, Vice-President; Dr. A. B. Nelson, of Arcadia, Secretary and Treasurer.

The following resolution was adopted.

Resolved, That we, the members of the Bienville Parish Medical Society, pledge ourselves collectively and individually to co-operate in suppressing illegal practice of medicine in the Parish of Bienville; and that the members of this Society be assessed a sufficient amount to defray the expense of injunction procedure against illegal practitioners; and that we pledge the State Board of Medical Examiners our co-operation in enforcing the law.

The following program was reported by the Committee for April 9: Acute Cerebro-Spinal Meningitis, by Dr. O. O. Hamner; Puerperal Septicemia, by Dr. H. I. Smith; The Toxemia of Pregnancy, by Dr. J. Atkinson; Differential Diagnosis Between Intra and Extra Uterine Pregnancy, by Dr. A. J. Pennington.

A. B. NELSON, Secretary.

AVOYELLES PARISH MEDICAL SOCIETY met at Cottonport on the night of January 3. Owing to bad weather and worse roads, the attendance was small. The following officers were elected for the current year: E. Regard, President; L. C. Tarleton, Vice-President; E. S. Matthews, Secretary-Treasurer.

A series of lectures on Communicable Diseases and Public Health was authorized delivered to the principal schools of the parish by members of the Society.

A resolution taxing each member \$4.00, payable in January of each year, for entertainment, was passed.

The subject of Life Insurance Fees was discussed, but final action was deferred until the next quarterly meeting. The recommendations of the A. M. A. will no doubt be passed.

The next meeting will be held at Bunkie, on Thursday, April 4, at 8 p. m. Subject: The Prevention of Tuberculosis.

The usual banquet was elegantly served at the Laborde Hotel, the waitresses being several of Cottonport's fairest young ladies.

CHAIRMEN FOR SECTION FOR 1904 MEETING.

GENERAL MEDICINE—Dr. J. C. Willis, Shreveport.

SANITARY SCIENCE AND QUARANTINE—Dr. J. N. Thomas, Quarantine.

MARITIME AND INLAND SANITATION—(Sub-Section)—Dr. Quitman Kohnke, Covington.

X-RAY AND ELECTRO-THERAPEUTICS—Dr. N. F. Thiberge, New Orleans.

DISEASES OF CHILDREN—Dr. J. S. Stephens, Jr., Natchitoches.

ORAL SURGERY—Dr. L. D. Archinard, New Orleans.

MATERIA MEDICA AND THERAPEUTICS—Dr. C. J. Gremillion, Alexandria.

SURGERY—Dr. E. D. Newell, St. Joseph.

NEUROLOGY—Dr. Roy M. Van Wart, New Orleans.

Subject: "Peripheral Nerve Injuries; Their Prognosis and Treatment."

GENITO-URINARY DISEASES—Dr. Charles Chassaignac, New Orleans.

Subject: "Is Sexual Continence Compatible with Health?"

OTOLOGY—Dr. J. P. Leake, New Orleans.

BACTERIOLOGY—Dr. J. D. Weis, New Orleans.

DERMATOLOGY—Dr. Ralph Hopkins, New Orleans.

OBSTETRICS AND GYNECOLOGY—Dr. R. W. Faulk, Monroe.

IMPORTANT NOTICE—Chairmen of Sections are requested to select their openers of discussions and to send the names thereof to the Secretary, Dr. P. L. Thibaut, 141 Elk Place, New Orleans,

La. This matter should be attended to at once, so that the information can be published in the next issue of *THE JOURNAL*. The subject of the Sections should also be selected without delay by the respective Chairmen.

Medical News Items.

CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS.—The Congress of American Physicians and Surgeons will be held in Washington, D. C., May 7, 8 and 9, 1907. This Congress, which meets every three years, will meet at the Arlington Hotel under the presidency of Dr. Reginald H. Fitz, the several presidents of the different national associations on special subjects constituting the vice-presidents. A preliminary program has been arranged and published which would indicate that the meeting will be a success.

SIXTH INTERNATIONAL DERMATOLOGICAL CONGRESS.—The Sixth International Dermatological Congress will meet in New York September 9 to 14, 1907. The sessions will be held at the Academy of Medicine on West 43d street. Meetings of this Congress are open to the public, and any member of the medical profession in good standing may join the Congress on payment of \$5.00 at the time of meeting or previously to Dr. John A. Fordyce, Secretary General for the United States, at No. 80 West 40th street, New York City.

This is the first meeting of this particular Congress in America, and the aggregation usually in attendance in foreign countries indicates that it will be a notable gathering this year.

English, French, German, Spanish and Italian are the languages allowed, and a copy of the proceedings will be furnished every registered member in attendance.

THE MEDICAL GAZETTE OF PARIS, the oldest journal of medicine in France, will appear from now on under the direction of our confrere Dr. Lucien-Graux, already editor in chief of the *Gazette des Eaux*.

THE NAME OF THE JOURNAL OF THE ASSOCIATION OF MILITARY SURGEONS has been changed with the issue of January, 1907, to "*The Military Surgeon*," retaining the old name as a subsidiary title.

THE AMERICAN PHYSIOTHERAPEUTIC ASSOCIATION announces the following officers for the ensuing year: President, Dr. H. H. Roberts, Lexington, Ky.; Secretary, Dr. Otto Juettner, Cincinnati, Ohio; Treasurer, Dr. George H. Grant.

THE PHI CHI MEDICAL FRATERNITY held its annual convention at the St. Charles Hotel in New Orleans the first week in January. The meeting was unusually well attended and from reports was a success. Mr. T. Spee Jones of the Tulane Medical Class was elected to the presiding office of the Fraternity.

FREE TREATMENT AT HOSPITALS.—At the Hospital Conference, held recently in London, it was shown that nearly five hundred out of every thousand of the population received free treatment at hospitals. This abuse is largely on the increase in this country as well as in Europe.

DEATH RATE IN NEW ORLEANS.—The death rate for whites in New Orleans during the past year was 16:49 per cent., the lowest ever recorded. With non-residents excluded, it was 14.86 per cent.

THE BROOKLYN MEDICAL JOURNAL, after an existence of twenty years, has ceased publication with its December issue.

EPILEPTIC COLONY.—The report of the Superintendent of the Epileptic Colony at Abilene, shows that during the year 324 patients were treated, and that more than 350 are still on the waiting list for admittance, which is denied for lack of room. It is also believed that there are a number of epileptics in the State of Texas who have not yet made application for treatment because it would be of no avail.

IN MEMORIAM OF DR. MARY PUTNAM JACOB.—At the memorial meeting in honor of the late Dr. Mary Putnam Jacobi, held on January 4, at the Academy of Medicine, in New York, the Women's Medical Association agreed to raise a fund of \$25,000.00 to establish the Mary Putnam Jacobi Fellowship, the income from

which is to be used to defray the expenses of some woman medical student in whatever country she chooses to study.

TO MEET IN NEW ORLEANS.—At a special meeting of the Executive Committee of the Institute of Dental Pedagogies, held at the Palmer House in Chicago, recently, New Orleans was selected for the fifteenth annual convention, and December 30, 1907, and January 1 and 2, 1908, the dates. The members of the new Committee are: Dr. E. Hillyer, New York; Dr. J. H. Bryan, of Indianapolis, chairman, and Dr. D. M. G. Gallile, Chicago.

THE ALEXANDRIA BOARD OF HEALTH, at its last meeting, declared Typhoid Fever, Measles, and Tuberculosis, contagious diseases. They also passed an ordinance forbidding the railroads bringing in cases of infectious or contagious diseases.

AMERICAN NATIONAL RED CROSS.—The annual report of the National Red Cross shows that during the year the organization collected \$3,358,974 used for relief given to the sufferers from the Vesuvius eruption, the San Francisco disaster, the Japanese famine, the earthquake in Chili, and the Mobile storm. The report shows that there are branch organizations in twenty-nine States, with a total reported membership of about 18,000.

RESOLUTION PASSED BY TULANE UNIVERSITY. The following resolution was passed at a recent meeting of the Board of Tulane University:

“Resolved, That in accordance with the unanimous recommendation of the University Council, the age limit of all professors and teachers, assistants and officers, paid a salary, and all persons eligible to pensions under the Carnegie Endowment in this University, is hereby fixed at 65 years, and the tenure of office of all persons as have reached the age of 65 years, shall expire as soon as such age is reached, unless by special order of the Board any such person shall be continued in his position.

“Resolved further, That this resolution shall go into effect on July 1, 1907.”

THE CHICAGO HEALTH DEPARTMENT HAS SIXTEEN MEN INSPECTING PUBLIC SCHOOLS, and has asked for an appropriation to employ a hundred inspectors.

Bossier Parish has recently organized a Parish Health Board.

PERSONALS.—Dr. Jos. Conn has resigned from the Out-Door Clinic of Touro Infirmary, after serving seven years. Dr. Jules Lazard has been appointed to fill his place.

Dr. W. W. Keen, of Philadelphia, who for nearly half a century has been prominently identified with medical institutions in Philadelphia, has resigned as professor of surgery of Jefferson Medical College. Following the acceptance of his resignation Dr. Keen was made professor emeritus. He will shortly sail for Europe and will remain abroad a year or more.

Dr. C. F. Gelbke, of Gretna, has been elected Coroner of Jefferson Parish.

Dr. E. M. Williams has moved from Morgan City to Patterson, La.

Dr. A. Graves, of San Antonio, Texas, was in the city recently.

Dr. A. K. Doss, of the Shreveport Charity Hospital, has been visiting his old homestead at Gueydan, La.

Dr. Ernest Laplace, of Philadelphia, was in the city during the Christmas holidays, with Mrs. E. Laplace.

Dr. W. M. Brumby, of Houston, Texas, has been appointed State Health Officer of Texas. Dr. Brumby graduated at Tulane and practiced at Delhi, La., for a number of years before moving to Texas.

MARRIED: On January 4, 1907, Dr. R. O. Marcour was married to Mrs. (Widow) Viola Volkman-Buhler.

At Natchitoches, La., Dr. Paul E. Bechet was married on January 9, 1907, to Miss E. Lucille Ducournau. The groom is a native of New Orleans, and has charge of the Natchitoches Sanitarium.

Dr. J. B. Hart and Mrs. Ernestine S. Ogden, Thursday, December 27, 1906.

In Philadelphia, on December 26, 1906, Dr. Urban Maes, of New Orleans, and Miss S. Gertrude Adamson, of Philadelphia.

Book Reviews and Notices.

All new publications sent to the JOURNAL will be appreciated and will invariably be promptly acknowledged under the heading of "Publications Received." While it will be the aim of the JOURNAL to review as many of the works accepted as possible, the editors will be guided by the space available and the merit of the respective publications. The acceptance of a book implies no obligation to review.

Medical Diseases of Infancy and Childhood, by ALFRED CLEVELAND COTTON, M. D. J. B. Lippincott & Co., Philadelphia and London, 1906.

So many texts have appeared in the field of pediatrics during the past few years that there must be some striking novelty in method to attract unusual attention. The evidence of this appears throughout the work of Dr. Cotton. The subjects are arranged so as to present a logical sequence for the student and, at the same time, the book is sufficiently comprehensive as a reference text for the practitioner. The illustrations are numerous, and it may be easily said that each one is necessary to the text because all are excellently presented. Altogether the work is one to be warmly recommended.

DYER.

Text-Book of Medical Jurisprudence and Toxicology, by JOHN J. REESE, M. D. 9th Edition Revised by HENRY LEFFMANN, A. M., M. D. P. Blakiston's Son & Co., Philadelphia, 1906.

It has been our privilege to review this popular text during several of its previous editions, and the commendation hitherto extended may be repeated in the present instance. Most works on Medical Jurisprudence follow the beaten track originally laid down by Taylor, Stille, Tidy and others, covering the specific, accepted questions in the borderland of medicine and the law. This text does not vary in this particular, chapters being devoted to examination of the living and dead for Identification, Toxicology, Rape, Infanticide, Insanity, etc. A brief page is permitted to the subject of Moral Mania, and this is supposed to cover the entire field of Perversion. Even this one page is a concession to the demand made by the exigencies of the law and of psychic medicine during the past fifteen years.

The neglect of medico-legal instruction in both schools of medicine and law perhaps excuses the editors of texts from making their work comprehensive, but the time is not far distant when the subject itself will demand the consideration of those alienistic and psychic questions which properly fall within the borderland consideration of medicine and the law, and these should be handled in texts pretending to the exposition of medical jurisprudence.

DYER.

Essentials of Materia Medica, Therapeutics and Prescription Writing, by HENRY A. MORRIS, M. D. W. B. Saunders & Co., Philadelphia and London.

Quiz Compends appear to be a necessary evil, and although every teacher in our medical schools may see their evils and inveigh against them, students will continue to buy and use them. This book has the merits and defects of its class.

J. T. H.

A Compend of Materia Medica, Therapeutics and Prescription Writing, by SAMUEL O. L. POTTER, M. D., M. R. C. P. P. Blakiston's Son & Co., London and Philadelphia.

Another Quiz Compend, which sufficiently indicates the scope and character of the book.

J. T. H.

An Introduction to Physiology, by W. T. PORTER, M. D. J. B. Lippincott Co., Philadelphia and London.

In his preface the author states that "This volume is a collection of fundamental and accessory experiments . . . printed for the temporary use of Harvard Medical Students and other interested persons." The latter will comprise teachers of Physiology and allied branches and students of that rapidly changing art or science, the Teaching of Medicine. As the reviewer knows from personal observation, the book is used with great profit by the students in the Physiological courses at Harvard. Other teachers may find here many valuable suggestions for their own courses.

J. T. H.

Essentials of Human Physiology, by D. NOEL PATON, M. D., B. Sc., F. R. C. P., Ed. W. T. Keener & Co., Chicago.

Prof. Paton has shown the practical common sense of the Edinburgh school in writing this book. We have here, in a book not so large as to discourage the student, a complete and well ordered exposition of the facts of human physiology, which the medical student must know. A clear and concise style, well chosen and well executed illustrations, and the omission of non-essential and confusing discussions and data, make this work particularly well adapted to the needs of the undergraduate student. We note with satisfaction the inclusion of the important recent additions to the knowledge of the physiology of the digestion, of metabolism, and of the nervous system. The reviewer knows of no text-book on this subject which evidences a more correct appreciation, on the part of the author, of the practical needs of the student, and of his necessarily limited time for supplying these needs.

J. T. H.

Progressive Medicine, June 1, '06,

This volume of our great quarterly contains advanced articles on Hernia, by Coley; on Surgery of the abdomen, exclusive of hernia, by Foote; on Gynecology, by Clark; on Diseases of the Blood, Diathetic and Metabolic Diseases, Diseases of the Spleen, Thyroid Gland, and lymphatic system, by Stengel; on ophthalmology, by Jackson.

E. M. D.

A Text-Book of Human Physiology, by ROBERT TIGERSTEDT, Translated and Edited by JOHN R. MURLIN, A. M., Ph. D. D. Appleton & Co., New York and London.

Tigerstedt's "Lehrbuch" has long been a standard and popular work in Germany, and Prof. Murlin has done a valuable service in rendering this work available to those reading only the English language. The author has made many valuable contributions to the knowledge of the physiology of various functions and organs, and when he writes it is both with authority and understanding. In a work of such level excellence it is hard to single out special portions for commendation. The chapters on Circulation, Digestion and Nutrition, and Metabolism, however,

stand out prominently, not because they are better handled than other sections of this work, but because they are so much better than the corresponding sections of most of our text-books.

Knowledge regarding the above mentioned functions has in recent years made enormous advances, and this knowledge is essential to a proper understanding and management of many clinical conditions to a greater degree than ever before. The translator has done his work well, and has been judicious in his abridgment of the more voluminous original work. The illustrations are well chosen and aid in making clear the meaning of the text. A thinner paper would have made the book of a more convenient size.

We heartily commend this work to not only medical students, but also to men already practicing.

J. T. H.

On Carbohydrate Metabolism, by F. W. PAVY, M. D. P. Blakiston's Son & Co., Philadelphia.

This very interesting volume contains a course of advanced lectures in physiology delivered at the University of London, in May, 1905, with an appendix on the assimilation of carbohydrate into proteid and fat, followed by the fundamental principles, and the treatment, of diabetes, dialectically discussed. The author is the well known honorary physician to King Edward VII Hospital, and consulting physician to Guy's Hospital. Of the many important points brought up the one that will strike the reader most is the demonstration that the glycogenic doctrine rests on faulty foundation. If physiology is to hold its right position, says the writer, and to act as a guiding instead of a misleading factor in relation to medicine, the interests of medicine demand that the glycogenic doctrine should be abandoned.

This work is a fine exponent of British contributions to medical literature.

E. M. D.

International Clinics, Vol. III, 16th Series.

The contents of this excellent quarterly are usually perused with the greatest profit. Those of the present volume are no exception—far from it. Each and every reader can find something to suit him, and article to his taste, according to his preferred work, as the volume embraces almost all the field of practical subjects.

E. M. D.

Rythmotherapy, by SAMUEL S. WALLIAN, A. M., M. D. The Oulette Press, Chicago.

"Rhythm is the underlying law of nature." "The external world is . . . an embodiment of blending or contrasting vibrations." Accepting these postulates it follows that "the universe itself is therefore a rhythmic reiteration," the phenomena of astronomy are explained, "the music of the spheres becomes a rhythmic verity."

Evolution is easily recognized as a rational sequence. It also follows that health is physiologic rhythm. Disease is rhythmic vibrations. Death is cessation of organic vibrations.

Following further this new and all explaining philosophy, we find that a modicum of dust and an electric thrill skillfully mixed result in a full formed cell. Put in one more thrill and we get proliferation by spontaneous fission (the reviewer had always supposed that a sexual generation and thrills had nothing in common).

"A certain rate begets a vermis, another and higher produces a viper, a vertebrate, a vestryman" (singular synonyms!). Have we here perhaps a hint as to the causative factor in sex determination? Would more haste or less speed result in the storks bringing to the father of ten girls the ardently desired son?

It is impossible in the limits of this review to give an adequate idea of all the wisdom hidden between the covers of this book. Perhaps the few extracts given will lead some of our readers to delve further into its pages.

J. T. H.

Stohr's Histology Arranged Upon an Embryological Basis, by DR. FREDERICK T. LEWIS, from the Twelfth German Edition by DR. PHILIP STOHR. Sixth American Edition, P. Blakiston's Son & Co., Philadelphia, 1906.

This is the most comprehensive and lucid text on Histology that we have yet seen. Beginning with the elemental consideration of the unit cell from the viewpoint of its protoplasmic origin, the embryologic development of the animal organism is considered up to the exegesis of the structures of the brain, nervous system and sense functions.

The text is elucidated with wonderfully clear illustrations, four hundred and fifty in all, and these serve to make the work really valuable to the student of the human organism.

As a text this work must meet a general demand, and for reference it is perfect.

DYER.

Practical Dermatology; A Condensed Manual of Diseases of the Skin, by BERNARD WOLFF, M. D. Cleveland Press, Chicago, 1906.

Excepting the work of Rohe, this is the first text on Diseases of the Skin by a Southern writer, and as such it should receive due consideration. The author has had a considerable training as clinical professor on diseases of the skin in Atlanta, which has prepared him for the work undertaken. Besides this, Dr. Wolff has carried into his professional life a scholastic training which has made the literary part of his endeavor easy.

The work itself is well presented in clean text and good paper, and the book is well made. A criticism may be entered as to the size, this being small quarto and inconvenient for the use of the student who carries his text often as a *vade mecum*.

The usual consideration of the histology of the skin, with paragraphs on diagnosis, etiology and treatment constitute the introductory part of the work. The diseases are arranged in alphabetic order, with no attempt at class grouping. In the short space of two hundred and thirty-five pages, including illustrations, most of the listed diseases of the skin are considered. Naturally, most attention has been given to the diseases more commonly met with, and the author has studiously avoided injecting a personal discussion into his text, which is commendable.

The illustrations have been derived from various members of the profession identified with dermatology, and the result is an excellent collection of photo cuts.

No attempt has been made to present argumentative discussion where differences of opinion exist regarding diseases and the commonly accepted pathology and etiology are presented. There are a few references credited, while the author of the book exercises customary courtesy in extending thanks and credit to the contributors of photographs.

Altogether the work is creditable and its chief recommendation must

consist in the simplicity of handling, the frequent suggestion of treatment, and the free illustration.

DYER.

The Subconscious, by JOSEPH JASTROW. Houghton, Mifflin & Co., Boston and New York, 1906.

It is difficult to digest a broad subject in a brief review. We consider it a privilege, however, to call the attention of the medical profession to this most excellent presentation of a subject which is beginning to attract both the lay and secular classes. Prof. Jastrow has evidently been stimulated to the present work by the miscellaneous exotic discussions which have occurred in the periodical and daily press on psychic phenomena. In his work there is a discussion of the evolution of the present conception of the subordinate brain in its relation to conscious acts, and while the work is one which must appeal chiefly to the alienist and exact student of psychology, it is so written that the average intelligence may follow the logic and philosophy contained.

DYER.

Practical Electro-Therapeutics, by FRANKLIN B. GOTTSCHALK, M. D. Published by T. Eisele, Chicago.

This book is all that it claims to be, a practical presentation of the application of electro-therapeutics, and is succinctly arranged for the use of the practitioner interested in this special field. The book concludes with a few suggestions for the use of electricity in particular diseases. It is well illustrated.

DYER.

Essentials of Medical Electricity, by EDWARD REGINALD MORTON, M. D., C. M., D. Ph. &c. W. T. Keener & Co., Chicago.

It is interesting to study the viewpoint of an English presentation of this subject. Like most hand-books, a great deal of material has been condensed in small space, and it must be said that the author has made a clear exposition of his subject. The typographic work is especially commendable for the clearness of the text and of the captions which make reference easy. While few, the illustrations are all practical.

DYER.

Progressive Medicine. Vol. VIII. No. 3. Lea Bros. & Co., New York and Philadelphia, 1906.

This particular volume of this well known work carries several divisions devoted to Diseases of the Nervous System, Obstetrics, Thoracic Diseases and Dermatology. The last is in the hands of Dr. Wm. S. Gottheil, of New York, and carries an excellent review of the year's progress in investigations in cutaneous medicine and syphilis. A number of rare diseases are reported and discussed with illustration, and some old friends are again brought into the limelight. Sabouraud, the father of modern knowledge of ringworm, is quoted as radically favoring the R-ray treatment of ringworm, which, from the reports here mentioned, seems to have a general vogue. An excellent review of differentiation of syphilis and of the present status of the organism of this disease are presented. Argument is advanced for the injection treatment of the disease with much merit attached.

As usual this digest of medical and surgical advance is complete in each of its particular departments, and the JOURNAL is consistently pleased to recommend the publication to its readers.

DYER.

Eating to Live, by JOHN JANVIER BLACK, M. D., J. B. Lippincott & Co., Philadelphia, 1906.

Timely is the word to apply to this most excellent referendum. The author presents an analysis of food values, and applies this specific information to particular conditions of gout, rheumatism and diabetes, as well as to other morbid conditions of the human frame. Diet combinations are suggested for particular purposes.

The work is readable and full of material suggestions, which alone justify the labor which the author has evidently expended in its preparation.

DYER.

How to Suppress a Malpractice Suit and Other Medical Miscellany, by THOS. HALL SHASTID, A. M., M. D., LL. B. Marion Publishing Co., Marion, Ill., 1906.

This little book is a reprint of miscellaneous articles on various subjects, all allied to the title, which have appeared in several medical journals, and which the author has believed sufficiently interesting or meritorious to present in book form

DYER.

Reference Hand Book of Diseases of Children, by PROF. DR. FERDINAND FRUHWALD. Edited with Additions by THOMPSON S. WESTCOTT, M. D. W. B. Saunders & Co., Philadelphia and London, 1906.

The name of Fruhwald in connection with diseases of children is now classical in medicine, and this, the first edition in an American translation, must be welcomed for its authoritative character. Of particular merit is the arrangement of this text in the form of a hand-book with the subjects discussed in alphabetic order. This makes the work encyclopedic, and of particular value as a reference. It seems a little odd to begin a text on Diseases of Children without the usual embryologic ideas and discussions, but in spite of this the reader of this especial text loses nothing in following the arrangement as indicated. Cross references are given and no pains have been spared to make each article elucidative. The text includes all of the subjects usually considered, and with the care which characterizes the Teutonic method.

DYER.

Second Report of the Wellcome Research Laboratories at the Gordon Memorial College, Khartoum. ANDREW BALFOUR, M. D. B. Sc., F. R. C. P. (Edin.), D. Ph. (Camb.), Director Department of Education Sudam Government, Khartoum, 1906.

It is needless to excuse the presentation of a review of the important work which this report entails. The functions of the Wellcome Research Laboratories are indicated in their own announcement, and these are to mention:

- a. To promote technical education.
- b. To promote the study, bacteriologically and physiologically, of tropical disorders, especially the infective diseases of both man and beast peculiar to the Sudan, and to render assistance to the officers of health, and to the clinics of the civil and military hospitals.
- c. To aid experimental investigations in poisoning cases by the detection and experimental determination of toxic agents, particularly the obscure potent substances employed by the natives.
- d. To carry out such chemical and bacteriological tests in connection

with water, food stuffs, and health and sanitary matters as may be found desirable.

e. To promote the study of disorders and pests which attack food and textile producing and other economic plant life in the Sudan.

f. To undertake the testing and assaying of agricultural, mineral and other substances of practical interest in the industrial development of the Sudan.

The report is full of valuable studies in entomology, with particular reference to the mosquito and other noxious insects. There are studies also of the trypanosomiasis. Other subjects find important consideration which require technical appreciation for review.

The Prophylaxis and Treatment of Internal Diseases, by F. FORCHHEIMER, M. D. D. Appleton & Co., New York.

This book is just what it purports to be, practical and full of information as regards exact treatment. Of the books on treatment we have so far met among the best was of British source, Tirard's by name. The present book in many ways is an improvement over even this authority, and we heartily recommend it. E. M. D.

Publications Received.

LEA BROS. & CO., Philadelphia and New York, 1907.

Progressive Medicine. Hare-Landis. Vol. III. No. 4.

Leas Series of Pocket Text-Books. Diseases of Children, by Geo. M. Tuttle. Series Edited by Bern B. Gallendet, M. D. 2d Edition.

A Treatise on Orthopedic Surgery, by Royal Whitman, M. D. 3d Edition.

F. A. DAVIS CO., Philadelphia, 1906.

A Practical Treatise on Materia Medica and Therapeutics. John V. Shoemaker, M. D.

Conservative Gynecology and Electro Therapeutics, by G. Benton Massey, M. D. 5th Edition

Syllabus of Lectures on Human Embryology. Manton. 3d Edition.

P. BLAKISTON'S SON & CO., Philadelphia, 1906-1907.

The Practice of Obstetrics, by J. Clifton Edgar. 3d Edition.

Tropical Medicine With Special Reference to the West Indies, Central America, Hawaii and the Philippines, Including a General Consideration of Tropical Hygiene, by Thomas W. Jackson, M. D. (2 copies.)

J. B. LIPPINCOTT CO., Philadelphia and London, 1906.

Pulmonary Tuberculosis; Its Modern and Specialized Treatment, by Albert Philip Francine, M. D.

THE YEAR-BOOK PUBLISHERS, Chicago, 1906.

The Practical Medicine Series. Head. Vol. IX. *Anatomy, Physiology, Pathology, Dictionary*. Edited by Evans, Gehrmann, Healy. Series 1906.

MORTUARY REPORT OF NEW ORLEANS.

(Computed from the Monthly Report of the Board of Health of the City of New Orleans.)
FOR DECEMBER, 1906.

CAUSE.	White.	Colored.	Total.
Typhoid Fever.....	7	1	8
Intermittent Fever (Malarial Cachexia)			
Smallpox.....			
Measles	1		1
Scarlet Fever.....			
Whooping Cough.....	2		2
Diphtheria and Croup.....	8		8
Influenza	2		2
Cholera Nostras.....			
Pyemia and Septicemia	2	2	4
Tuberculosis.....	41	34	75
Cancer.....	14	3	17
Rheumatism and Gout	1	1	2
Diabetes	2	3	5
Alcoholism	1	1	2
Encephalitis and Meningitis.....	5		5
Locomotor Ataxia.....	1		1
Congestion, Hemorrhage and Softening of Brain.....	22	1	23
Paralysis	3		3
Convulsions of Infants	2	3	5
Other Diseases of Infancy	21	20	41
Tetanus.....		6	6
Other Nervous Diseases			
Heart Diseases.....	51	35	86
Bronchitis	7	5	12
Pneumonia and Broncho-Pneumonia.....	37	25	62
Other Respiratory Diseases	3	5	8
Ulcer of Stomach.....			
Other Diseases of the Stomach	7	1	8
Diarrhea, Dysentery and Enteritis.....	41	19	60
Hernia, Intestinal Obstruction.....	2	4	6
Cirrhosis of Liver.....	9		9
Other Diseases of the Liver	7	2	9
Simple Peritonitis	2		2
Appendicitis.....	3	2	5
Bright's Disease	38	17	55
Other Genito-Urinary Diseases	3	1	4
Puerperal Diseases	6	3	9
Senile Debility.....	14	11	25
Suicide			
Injuries.....	21	27	48
All Other Causes.....	19	22	41
TOTAL.....	405	248	653

Still-born Children—White, 19; colored, 21; total, 40

Population of City (estimated)—White, 245,000; colored, 88,000;
total, 333,000.Death Rate per 1000 per annum for Month—White, 19.83; colored,
33.82; total, 23.53.

METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmospheric pressure 30.21
Mean temperature 59.
Total precipitation 3.31 inches.
Prevailing direction of wind, north.

New Orleans Medical and Surgical Journal.

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MARCH, 1907.

No. 9

Original Article.

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. A complimentary edition of one hundred reprints of his article will be furnished each contributor should he so desire. Covers for same, or any number of reprints, may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

Louisiana State Medical Society Proceedings.

(EDITED BY PUBLICATION COMMITTEE).

P. L. Thibaut, M. D., Chairman.

DR. WARREN STONE BICKHAM, of New York, a guest of the Society, on being introduced to the members, spoke as follows:

Foremost of all I wish to express my earnest appreciation of the kind invitation extended me by your Committee to be present and take part in this meeting of the Louisiana State Medical Society, and to make you know the genuine pleasure it is to me to be with you again in my old home.

The extent of the field of spinal surgery was not fully recognized when the present article was promised, and when it was completed it was found unmanageably long. One has learned from considerable observation that the amplest provision of good nature

which a medical audience may bring to a medical reading is generally severely taxed in the first half hour, and has usually entirely gone, or is slumbering, before the second half has lapsed! And hence only so much of this writing will be read as may be brought within the allotted time (three-quarters of an hour), with, if granted, a few minutes over in which to demonstrate the features of the Osteoplastic Resection which Dr. Gessner has kindly helped to do upon the cadaver—that the time may not be too largely infringed upon in which to hear the views upon spinal surgery of those gentlemen who have been good enough to promise to enter into the discussion—which it is hoped will be full, and devoted, as well, to those aspects of the subject which it may not be possible to bring up in this paper.

The Operative Surgery of the Spine and Cord.

By Dr. WARREN STONE BICKHAM.

INTRODUCTION.

Sir Astley Cooper, in 1823, wrote, "If you could save one life in ten, aye, one in a hundred, by such an operation (referring to exposure of the spinal cord), it is your duty to attempt it, notwithstanding some objections which some foolish persons may have urged against it." Continuing, he adds, "Though I may not live long enough to see the operation frequently performed, I have no doubt that it will be occasionally performed with success.

There is no reason why it should not, and he who says it should not be attempted is a blockhead."

Sir Astley Cooper was a well-balanced man of broad, practical experience—and what he said then of Spinal Surgery, shortly after its scientific beginning, might well be taken as a challenge to the surgeons of to-day, whose progress along these lines has not been what the number of elapsed years has warranted us in expecting. More than a half-century passed before, in 1887, the creditable pre-operative diagnosis of Sir William Gowers enabled Sir Victor Horsley to successfully remove a tumor from the spinal canal—which may be taken as an epochal period in spinal work. But much yet remains to be accomplished, physiologically and diagnostically, as well as surgically, even admitting the inherent difficulties in the way, before Spinal Surgery may be upon a parity with many other branches of surgery.

The object of the present paper is fivefold:

(1) To plead for greater ability on the part of the surgeon to diagnose his own neurological cases, which involves a broader knowledge of the physiological, pathological and clinical phenomena of nerve-functions and nerve-conditions.

(2) In the absence of such ability, whether on the part of the surgeon or neurologist, and in the present status of limited knowledge of the cord in health and disease, and considering the equivocation of many clinical phenomena, to emphasize the fact that absolutely the only possibility of ascertaining the condition of the cord in many cases, and, consequently, of giving a patient the best chance for recovery, is by exposing the cord through an open wound and seeing and feeling it.

(3) To argue for the freer application of surgical measures to a larger variety of spinal lesions.

(4) To lay stress upon the need of prompter surgical action, and sufficiently radical action, in those cases where surgical action is called for at all.

(5) To urge a better technic in Spinal Surgery generally, and the substitution of the Osteoplastic method of Resection in exposing the spinal cord and canal for the still almost universally adopted older form of exposure by Laminectomy.

The salient feature of Spinal Surgery, from the *practical* standpoint, is very much more largely one of diagnosis rather than of operative technic. Leaving out of consideration the broad question of regeneration of nerve-tissue, the greatest problem in the Surgery of the Cord is decidedly the matter of determining the nature and extent of the lesion involving the integrity and conductivity of the cord. And in the present light it seems much more probable that the onus of failure will fall at least quite as heavily upon nature's inability to repair the damage, and the diagnostician's inability to discover it, as upon the surgeon's technic in exposing the site and removing the cause of cord-pressure and local and general infection, which, at present, in purely cord traumatisms and lesions, is the limit to which the surgeon can go.

As to the matter of diagnosis, the natural precursor of subsequent steps toward the relief of all lesions, the inter-relationship of surgeon and neurologist must arise, except in those cases where an evident lesion, with external evidences, carries its own diagnosis

plainly with it. In other cases, in this country especially, the mutual aid of surgeon and neurologist is acknowledged—which acknowledgment also carries with it a certain degree of mutual embarrassment—the embarrassment of not knowing *what* to do, on the part of the one, nor *how* to do it, on the part of the other. This non-fitness on the part of the majority of surgeons to do, in general parlance, their own “localizing” is, indeed, a matter of scarcely pardonable humiliation, in which the writer fully shares—and is the result of a combination of circumstances, both as to early application in such work, and neglect of subsequent contact with such cases—the practical bearing of which is, that unquestionably many lives are lost which might have been saved if given the benefit of an earlier contact with surgical and neurological advice. Undoubtedly for the highest development of Neurological Surgery, or Surgical Neurology, in the broadest sense, some neurologists should become surgeons in the operative bearings of their work—or some surgeons should be better neurologists.

The field of Spinal Surgery is large, embracing both established procedures, and others which are under trial. The following will be here considered, in order:

Injuries of the Spine and Cord, involving Concussion, Contusion, Compression and Transverse Destruction, partial or complete, and including the following forms of traumatism:

Incised and Penetrating Wounds,

Gunshot Wounds,

Fractures,

Dislocations,

Fracture-Dislocations,

Lumbar Puncture for Cyto-Diagnosis.

Lumbar Puncture for Spinal Analgesia,

Lumbar Puncture for Therapeusis, including the Evacuation of Fluid Tumors,

Spina Bifida,

Acute Infective Osteo-Myelitis of the Vertebrae,

Tubercular Osteitis of the Vertebrae, manifested either as

Posterior Vertebral Tubercular Osteitis, or Anterior Vertebral Tubercular Osteitis—Pott's Disease,

Osteoplastic Resection of the Spine,

Laminectomy.

Preliminary to taking up the individual lesions, it is well to review some of the more important principles underlying the Surgery of the Cord—some of which are more or less academic, while others are considerably disputed.

GENERAL CONSIDERATIONS IN LESIONS OF THE SPINAL CORD.

Apart from the purely spinal conditions, the chief phenomena which arise in lesions involving the cord alone, or the cord and spine together, are those which are due to pressure upon the cord, or are the results of pressure or infection. And for the practical purposes of the surgeon, these phenomena, commonly known as "pressure symptoms," are essentially alike—whether the lesion be any one of the several injuries to which the cord may be subjected, or any of the diseases which may primarily or secondarily affect the cord—whether originating entirely within the cord, as an intramedullary tumor, or entirely within the spine, as Pott's Disease. Therefore some of the phenomena upon which Spinal Surgery rests, as well as some of the issues in controversy, will be here considered—while others will be given under the particular lesions upon which they have special bearing.

Knowledge relating to the spinal cord is not as great as in many other fields of surgery, and is not great enough to give clear indications either for interpreting physiological and pathological occurrences or for surgical interference.

As the roots of the spinal nerves have more extensive and more distant origins than indicated by the names and numbers, of the vertebrae in contact with which they leave the spinal canal, and as the segment of the involved spinal cord does not lie directly, if at all, under the vertebra from which it derives its name, but receives its designation from the fact that the nerve which belongs to that vertebra arises in that part of the spinal cord, it becomes necessary to learn the relationship of each segmental unit to the skeletal landmarks, vertebrae and spines, as well as the physiological role which each segment plays, and the peripheral distribution of nerves to and from these segments—the tracts of the cord being at the same time understood. It is in this connection also that an extensive area of the cord has to be exposed to be certain of removing impediment to transmission of impulses in both directions.

Owing to the relation of the deep nerve-roots to the spinal

segments it is necessary to allow for the range of at least three segments in "localizing"—as all the muscles (except some small ones of the back) receive their motor supply from at least two segments of the cord, and every part of the skin derives its sensory supply from three nerve-roots or cord-segments. And further, degenerative changes in the cord may follow afferent and efferent tracts for variable distances before involving the nerve-center in the gray matter of the cord—consequently the *cause* of a motor paralysis, or sensory anesthesia, may be considerably above the site of entrance of the nerve into the cord.

The symptoms of gradually increasing pressure-lesion of the cord is especially well given by Collier as follows: "Motor paralysis and spasticity, equilibratory anesthesia, sphincter paralysis, thermanesthesia and analgesia, tactile anesthesia, flaccidity with loss of the deep reflexes, progressive muscular wasting, progressive lowering of faradic excitability and progressive loss of sphincter-tone."

Primary degeneration occurs at the site of, is caused by, and quickly follows lesions of the cord. Secondary degeneration (probably due to severance of nerve elements from trophic centers, and not to original injury) begins by the fourth day after the lesion, and extends upward and downward during the following months. A zone above and one below the maximum lesion undergo partial degeneration. If the injury be compression and the cause of compression be removed, partial regeneration may be expected to occur by the ninth day.

The very important—and, indeed, decidedly the most important—questions in the field of Spinal Surgery come up in connection with complete transverse lesions of the cord; in the first place, as to *whether* there has been absolute transverse lesion of the cord; secondly, whether it can be *recognized*; thirdly, whether such lesion is *capable* of repair, either in whole or in part; and fourthly, what are the *indications* for operation upon such cases.

Upon none of these questions is there any unanimity of opinion—the proof of which statement is borne out by the following quotations bearing upon the first three—the fourth, or the question of operation, being considered later.

As to whether complete transverse lesion can be repaired—Collier writes, "Immediate suture experiments upon the spinal cords of animals have shown that regeneration is possible in the spinal cord.

And the researches of Bielchowski (in the *Centralblatt for Neurology*, 1901) argue strongly that it is no rare event as a sequel to lesions of the human nervous system." Further, he adds, "In a few cases the clinical picture of total transverse lesion has changed to one of incomplete lesion at a period so remote from the occurrence of the lesion and under such circumstances, as to suggest strongly that the conductivity through the region of the lesion had been restored by the regeneration of the nerve fibres."* Lloyd states, "There can be no hope of restoring function to a destroyed spinal cord." Cushing says, "Again, we are not in a position to say with finality, that divided spinal tracts are incapable of regeneration." From Walton comes the statement, "A sufficient number of authentic cases have come to record, operated and unoperated, with more or less complete restoration of function following traumatisms and symptoms accepted by some of the best surgeons of the world as indicating complete transverse division of the cord, to establish the fact that the cord is sometimes capable of a considerable degree of restoration of function after some complete transverse lesions."

As to whether there has been complete transverse lesion—and if so, whether it can be recognized: From Burrell comes the statement, "Total transverse destruction of the cord may be deducted from persistence of the following symptoms: Total loss of all reflexes, complete insensibility to touch and pain, and motor paralysis below the level of lesion." Thomas characterizes complete transverse lesion by, "(1) Complete paralysis, usually of a flaccid type. (2) Complete loss of sensation in all its forms. (3) Abnormal reflexes, especially knee-jerk, while plantar reflex, on the contrary, is often maintained. (4) Complete paralysis of bladder and rectum, with priapism. (5) Vasomotor paralysis, with severe sweating in the paralyzed parts. (6) Absence of irritative phenomena, such as pain. (7) Most important, absence of variations in the symptoms." Walton writes, "There are no symptoms which establish (otherwise than through their persistence) irremediable crush of the cord"—adding that there is no infallible guide to the extent of the lesion—and, further, "While total relaxed paralysis, anesthesia of abrupt demarkation, total loss of reflexes, retention,

*Mikulicz was unable to demonstrate regeneration in animals. And Guidone, after excising 1 cm. in animals, got unsatisfactory return of function.

priapism and tympanites, if present, point to complete and incurable transverse lesion, the onset of such symptoms does not preclude a certain degree, at least, of restoration of function." Oliver states that Weissman declares that nerve cells once destroyed are never replaced—and that Worcester's observations are given to prove the contrary. Barker, while not denying that regeneration is possible, writes, "Regeneration of severed nerve-fibers within the spinal cord and brain is, unfortunately, very much less complete than in the peripheral regions." Cushing, in another part of his writings, states, "We can not always be certain that a complete transverse destruction of a segment and not a partial injury with a physiological 'block' of the remainder is indicated by the disturbance of function caudal to a lesion." Finally, Collier adds, "Clinically, a physiological total transverse lesion may be considered to exist when there is absolute loss of sensibility, complete flaccid paralysis, and loss of the deep reflexes. Such a complete physiological abrogation of the functions of the transverse area of the spinal cord may exist without actual death of the elements involved, and these elements may recover more or less completely, as is frequently the case in pressure paraplegia and lesions involving evascularization of a transverse area of the spinal cord; further adding, "In another large group of cases the outset has been sudden or rapid (as in fracture-dislocation and acute myelitis) and the clinical picture of total physiological transection has been produced at once or early, but various degrees of recovery have subsequently occurred."

To summarize the above quotations is a reiteration of the original statement—that there is no uniformity of opinion as to whether regeneration of the cord involved by lesion is possible—nor any uniformity of judgment as to what phenomena, if any, constitute clinical proof of a complete transverse lesion.

One must either admit that some degree of regeneration is possible after complete transverse division, or that those cases of reported recovery, or great improvement, after so-considered complete transverse lesion of the cord must be taken as cases where the destruction has not been as complete as supposed, but in which some fibres of the cord actually remained to bridge the separated ends of the main portion of the cord. And even this supposition would apply with less force to those cases where the full condition

of the cord had been exposed in operation and the gap in the cord actually demonstrated.

Whatever may occur in exceptional cases, unquestionably in the vast majority of cases complete transverse destruction of the cord has been followed by permanent paralysis.

Probably a fair and reasonably accurate reconciliation of divergent views as to the possibility of regeneration of nerve-fibres in complete transverse lesions of the cord would be to consider: (1) That complete transverse lesion of the cord without tangible loss of cord-substance may be followed by some degree of regeneration in favorable cases; and (2) that complete transverse lesion of the cord with tangible loss, or destruction of cord-substance is not *likely* to be followed by any regeneration. It will be noticed that a difference is made here between "transverse division without tangible loss of cord-substance," and "transverse lesion with tangible loss, or destruction, of cord-substance." It is regrettable that in many of the cases recorded the expressions, "complete division," "lesion" and "destruction" are so loosely used as to not make plain just what the involvement of the cord was.

As to reconciling the contradictory opinions concerning the possibility of positively and promptly recognizing, clinically, complete transverse lesion of the cord in the majority of cases, the writer knows of no way other than by exposure.

GENERAL INDICATIONS FOR OPERATING IN LESIONS OF THE CORD AND SPINE.

Many surgeons have laid down elaborate rules, often with a half dozen or more subdivisions, as to the conditions found, clinically, warranting or contraindicating operation in lesions of the cord and spine. These have almost always been based upon the supposition of certain existing conditions—and these conditions have been premised by certain phenomena—the frequent fallacy of which one believes has been shown.

In what immediately follows, reference is chiefly to traumatic conditions, but may, with necessary modifications, be taken to apply also to conditions of disease.

In each one of three categories may be found many of the best surgeons of the world—surgeons opposed to operating in *any* case of injury to the spine, those in favor of operating in *every*

case, and those, the middle men, who operate in selected cases only.

One should say it would be better to operate needlessly upon a case of concussion than not to operate in time upon a case of compression—which is putting the matter as it appeals to the writer.

One reason actually given by some men *against* operation in spinal injuries is that the full nature of the traumatism can not be known in advance—which the writer would place at the head of the list of arguments *for* operation.

The delay so often counselled in Spinal Surgery is not in keeping with the prompter action recommended in corresponding cerebro-cranial lesions, which fact alone should cause one to question whether the course usually adopted in the former category of cases is not a grave as well as a surgical error; for, as in the region of the skull and brain, so in that of the spine and cord, the matter of the bony tissue may be ignored, the question of surgical interference pivoting upon the question of the nature and amount of injury or lesion sustained by the nerve-structures, the likelihood of being able to render mechanical relief, and the regenerative ability of the nerve-matter involved.

Admitting that no restoration of function is to be expected after complete transverse lesion of a limited segment of the cord—and even this is not absolutely admitted for all cases—there remains the practical question as to *how* one is to *know* such destruction as is *supposed* does actually *exist*; there are no phenomena accepted as positive proof available immediately following the injury—and the supposition is only reached after an often disastrous persistence of paralytic symptoms, unless operation reveal the true condition earlier, and, often, in time. Without, therefore, stopping to argue whether the symptoms present are the result of the pressure brought to bear at the time of the injury and still continuing, or the result of a beginning degeneration—open the canal and see.

The following suggestions, illustrative of elaborate tabulation of indications, are made by Lloyd as to the adoption of an operative or non-operative course in cases of spinal lesion:

(1) Do not operate where complete destruction of the cord has evidently occurred.

(2) Operate, after recovery from shock, in those cases where

it is evident that the lesion of the cord has not been complete, but in which no improvement occurs.

(3) Operate at once where the lesion is incomplete and where compression symptoms are extending.

(4) Where improvement occurs at first and then ceases, operate as soon as there is a cessation of improvement.

(5) Operate on those cases which have nearly or completely recovered without operation and where, subsequently, compression symptoms develop, as from secondary changes. Operate as soon as it is evident some loss of function is occurring.

Personally, if one were to formulate a line of action in such cases, it would be as follows: Operate at once upon all cases of spinal lesion, of no matter what kind, provided the phenomena make it reasonably certain that injury to the cord, other than concussion, has been done and is being kept up, and provided the patient's general condition does not contra-indicate. Operate at the end of 24 hours in all cases where a reasonable doubt as to the nature of the lesion still continues, or where the symptoms remain stationary, or become more marked. Operate at any time subsequently if a resumption of symptoms occur after their disappearance, or improvement.

Putting it somewhat more extremely, though not as a matter of advice, the writer believes that if 1,000 cases of lesions of the cord were operated upon within 48 hours, indiscriminately as to the nature or degree of lesion, that a much larger percentage of recoveries would be recorded in the total, than would be recorded from the 1,000 cases of lesion from which the patients are selected for operation, as is the usual custom.

It seems likely that the majority of cases sustaining severe traumatism of the spine and cord must die, yet, eliminating those in which death must have been inevitable, it is reasonably certain that other lives must be lost through non-operation, or by delay in operating.

If an operation be performed in doubt, and a marked injury, especially if remediable, be found to have been sustained by the cord, there can be no question as to the warrantability of the operation. And even if no such injury, or a minor injury, be found, no great harm is ordinarily done by the exploratory opera-

tion itself, while the patient is certainly given the best chance, and the surgeon's conscience the greatest, and one would say, the only satisfaction possible.

The operation is not generally dangerous to life, nor a source of subsequent discomfort. It may reasonably be expected to demonstrate the nature of the lesion, and it usually lessens the pain which so frequently accompanies the condition.

As to late operations—operations performed at some date remote from the reception of the injury or first knowledge of the lesion—apparently conflicting phenomena are observed. While it is generally the case that if a harmful degree of pressure upon the cord be allowed to continue, the cord soon undergoes irreparable damage, and that the longer and more complete the pressure-paralysis, the poorer the chance for restoration of function—yet, on the other hand the vitality of the cord is often wonderfully preserved, and has resumed its functions after relief from pressure which has been in operation for months or even years, giving the idea that the functions of the cord, where not destroyed by the destruction of the cord at the time of injury, have simply been held in suspension during the continuance of the compression.

So, on the other hand, cases are known in which improvement follows spinal injury up to a certain point, and then, after weeks or months, paralysis and other retrograde changes come on. It is often difficult to explain these changes, though operation reveals a remediable condition, frequently the result of secondary phenomena.

OPERATIVE TECHNIC IN EXPOSING THE SPINE AND CORD.

It is not the writer's intention to go in detail into the matter of Operative Technic, which is lengthy in itself, and which was covered in considerable detail by an article and illustrations by him, entitled "The Technic of Exposure of the Spinal Cord and Canal; Osteoplastic Resection and Laminectomy," read before the Surgical Section of the New York Academy of Medicine, Dec. 2, 1904, and subsequently published in the *Annals of Surgery*, March, 1905, the general scope of which is sufficiently indicated by the headings of the subdivisions of the paper, which might also serve as general outlines of the steps of the operations, and which alone will be here given, as follows:

(A) General Considerations of the Osteoplastic Resection of the Spine and Laminectomy, and Their Relative Values;

(B) Features Common to Both Operations:

Preparation of operation-site—Position of Patient, surgeon and assistant; Anesthesia—Instruments and Accessories—Landmarks of operations—Manner of incising muscles and aponeuroses—Manner of clearing soft parts from spines and laminae—Manner of dividing the laminae—Instrument for making the bone-sections—Control of hemorrhage.

(C) The Technic of Osteoplastic Resection of the Spine; Which Includes the Preliminary and Main Operations:

(1) Preliminary Excision of the Spinous Process immediately Above the Osteoplastic Flap:

Incision—Exposure of the spinous process—Severing of supra- and inter-spinous ligaments—Excision of the spinous process—Temporary packing of the preliminary wound—Final suturing of the preliminary wound.

(2) Formation and Turning back of the Osteoplastic Flap :

Incision—Division of the muscles and aponeuroses—Freeing the laminae preparatory to their division—Division of laminae and ligamenta subflava—Division of the supraspinous, interspinous and interlaminous ligaments—Separation and turning back of the osteoplastic flap—Freeing of the spinal cord from extra-dural fatty areolar tissue, and control of intra-spinal hemorrhage—Opening of the membranes of the cord—Manner of dealing with the incised membranes—Reposition of the cutaneomusculo-osseous flap—Buried suturing of muscles and aponeuroses—Skin and fascial suturing—Provision for drainage when indicated—After-treatment—Comment.

(D) The Technic of Laminectomy:

For which the steps, with the necessary modifications, are very similar to those just given.

“Weighing all considerations involved in the selection of one or the other method of approach, the choice of operation should in the opinion of the writer, be unquestionably given to the osteo-

plastic resection, as an altogether more surgical procedure, saving to the individual, as it does, practically all of his structures, all save one spinous process; leaving, after union, an almost intact and necessarily stronger spinal column, affording a freer and fuller field for inspection and manipulation at the time of operation, and furnishing not only greater subsequent protection to the spinal cord, but also most probably giving greater immediate protection to the cord by reducing, in shutting off the spinal canal, the chances of intraspinal infection in the event of non-primary healing."

There is no doubt but that it has happened that damage has sometimes been unnecessarily done to the cord by the surgeon himself during operation, in addition to that already inflicted by the traumatism. And it seems reasonably certain that men have held off from operating (with a certain loss of human life in consequence) because of not having mastered a *satisfactory* method of exposing the cord, and because of having been timid or unwilling to approach the structure by an *unsatisfactory* or uncertain method.

Until rather recently none but the old operation of Laminectomy was ever used to expose the cord, and even at the present day there are very few men, the writer among them, who have used the osteoplastic method upon the living. The chief explanation of its infrequent use, it seems to one, is that the methods of Osteoplastic Resection usually described are generally exceedingly crude and rude, and indeed, inferior to the older Laminectomy. But with such present adjuncts as the preliminary excision of a spinous process (credited to Hartley, and without which it is hard to conceive of any satisfactory osteoplastic resection)—the freeing of the spinal grooves with a chisel, and the section of the laminae at a right angle to their surface with such an instrument as a Doyen-saw—all the main difficulties, which were purely mechanical, are removed. The manner of applying these will be shown later.

INJURIES AND DISEASES OF THE CORD IN GENERAL.

All injuries of the Cord involve, as an immediate result of the trauma, either Concussion, Compression, Contusion, Laceration or Destruction, which last may be partial or complete. The ultimate result are either infection, restoration of the part to the normal, or degeneration, partial or complete.

Injuries may come to the cord directly, as by the passing of a knife-blade between the laminae, or indirectly, through injury to some part of the bony structure which surrounds it.

Lesions, other than trauma, involve the cord by pressure, by disintegration of the nerve elements, or by infection, whether involving the cord primarily or originating within the bones of the spine.

In the following description of lesions and their surgical bearings necessarily only salient features will be given, and in as condensed a form as possible.

INCISED AND PENETRATING WOUNDS.

(I) Classification of Wounds as to Penetration (penetration meaning either penetration of both membranes and cord, or membranes alone) :

- (1) Wounds where penetration is doubtful,
- (2) Penetrating wounds without injury to cord,
- (3) Penetrating wounds involving the cord.

It is evident that one of these conditions must exist—but it is evident that it may often be impossible to tell which.

(II) Indications for surgical measures, dependent upon the period which has elapsed since the wound :

- (1) In the period immediately following the wound, the indications must be drawn from the conditions of injury and the nature of the instrument inflicting it.
- (2) In the period secondary to the wound, the indications are furnished by the complications which have arisen.

(III) Indications for surgical measures, dependent upon the period of the wound, taken in conjunction with penetration or non-penetration :

(A) In the Immediate Period :

- (1) Where penetration is doubtful, one may intervene at once or await the development of the case.
- (2) Where penetration is supposed to have occurred, but no nervous symptoms have developed, intervene.
- (3) Where penetration is supposed to have occurred, and nervous symptoms have developed, two possibilities arise :

If incomplete section of the cord is supposed—operate.
If section of the cord is supposed to be complete—the usual advice is not to operate. The writer would advise operation, on the ground, first, that such can not be known without operation, and secondly, that it is better to *attempt* to repair the damage than *not* to attempt to do so.

(B) In the Secondary Period:

If continuous suppuration occurs, or pressure symptoms—operate.

If foreign body be present;

If it be a determining factor—operate.

If an unimportant factor—remove if accessible.

Some generalizations may be made in connection with Incised and Penetrating Wounds.

An escape of cerebro-spinal fluid argues a penetrating wound.

A suspicious wound, accompanied or followed by cord- or nerve-phenomena, is more apt to be penetrating than otherwise.

Lumbar-puncture made for diagnosis, in which bloody fluid is withdrawn, is sufficient warranty for accepting penetration, provided it is not likely the blood comes from the needle-wound. Failure to withdraw blood, while presumptive, is not such positive proof in the opposite direction.

If one be in doubt, the wound can be enlarged, stopping short of exposing the cord if there be reasonable evidences against penetration.

It is safer to drain all doubtful wounds—reference being here made to wounds of the overlying soft parts.

If the membranes have been opened by the wound, the membranes should not be sutured where infection is likely to have occurred. If infection be unlikely, suturing of the membranes will make subsequent outside infection less likely to occur, and will prevent the escape of cerebro-spinal fluid.

If the membranes be drained, keep the head low.

Symptoms may be caused by no actual wound of the cord, but indirectly by a hematoma resulting from the wound and pressing the cord intra-spinally.

Intra-spinal hemorrhage may be extra-dural or intra-dural, or within the cord, hematomyelia.

One should guard against considering every nervous phenomenon as evidence of penetration.

Undoubtedly the most difficult cases in which to reach a decision will be those in which it seems certain that penetration has occurred, and yet in which there are no nervous symptoms. While undoubtedly the safest plan in such cases would be to operate, yet it is probable that the majority of men would await evidences of infection or pressure—for which one does not think there would be much criticism.

GUNSHOT WOUNDS.

Gunshot wounds, owing to the nature and size of the projectile, form, with fractures, a class of injuries in connection with which complete transverse destruction of the cord is most apt to occur.

They more nearly resemble fractures in the amount of damage they are apt to do the cord, both by their own trauma and that of bone-splinters—while they more nearly resemble penetrating wounds in other respects.

The indications for surgical interference are, practically, the same as those just given for incised and penetrating wounds, with even more emphasis upon prompt operative treatment—and the generalizations there given also apply here.

A paper upon Gunshot Wounds of the Spinal Cord was read before the New York Academy of Medicine last week by Haynes, in which there was strong argument for early and more general operation, and in which it was conclusively shown that cases so treated stood a better chance of recovery than the non-operated cases. His researches covered the last ten years, from 1896 to 1906. During this time he could find only 43 cases recorded, to which were added 3 cases (with 1 recovery and 2 deaths) operated by the writer, in the Charity Hospital of this city. Of this total of 46, 33 were operated, 19 recovering and 14 dying—giving a mortality of operated cases of $42\frac{1}{2}$ per cent. Of the 13 non-operated cases, 4 recovered and 9 died—giving a mortality of $69\frac{1}{2}$ per cent. There is thus, in this collection, a percentage of $26\frac{3}{4}$ per cent in favor of operation.

The following conditions were found in the above cases : Bullet in spinal canal, 11 times; cord severed, 10 times; cord crushed, 4

times; cord pierced by bullet or bone, 5 times; cord compressed, 11 times; not designated, 5 cases; total, 46.

The questions of greatest practical importance in gunshot wounds of the spine are as to the extent of injury done the cord, and the best method of treating the condition. It is exceedingly interesting, as well as remarkable, to know that among the above 46 cases there were three cases reported (by the late Dr. Fowler, of Brooklyn; by Estes, of Bethlehem, Penn., and one conjointly by Stewart and Hart, of Philadelphia) in which there was total transverse destruction of the cord, with loss of substance, in which the ends of the cord were united by suture, and in which not only was life saved, but also some degree of functioning regained.

The manner of dealing with the cord in these three successful cases is here given:

In the case of Stewart and Hart, operated 3 hours after injury, $\frac{3}{4}$ -inch of the cord, opposite the 7th dorsal vertebra, was destroyed by the bullet. The ends of the cord were approximated by one antero-posterior and two transverse chromic gut sutures, passing through the entire thickness of the cord.

Estes, operating on the 10th day, writes, "I made a complete section of a disintegrated cord at the 1st lumbar vertebra—removed about $\frac{3}{4}$ inch—squared off the ends, and brought them together with catgut sutures, and sutured the dura over the united cord."

Fowler, also operating on the 10th day, found a 38-calibre bullet lying between the ends of a completely divided cord, between the 10th and 11th dorsal vertebrae. He wrote, "The ends of the cord were then sutured with three fine chromic catgut sutures. No special difficulty was experienced in drawing together the ends of the cord and closing the defect, the latter representing the width of the diameter of a 38-caliber bullet. The dura was further secured with a number of sutures of fine catgut, and a drain, consisting of a half-dozen narrow strips of oiled silk protective, introduced."

In all three cases a Meningo-myelorrhaphy was done—and Estes preceded his suturing by the excision of the ends of the cord.

Instead of passing the sutures through both membranes and cord, Chipault advises passing them through membranes alone, thus avoiding further damage to the cord proper. In the writer's case, where the cord was completely severed and an amount correspond-

ing with the diameter of the ball gone, the sutures were passed through the membranes and cord—but it was impossible to approximate the ends of the cord. In the future one would temporarily divide two or three sets of nerves, if necessary, and loosen up the dura from the canal, and then do a simple circular Meningorrhaphy, by interrupted fine chromic-gut sutures passed through the membranes only—suturing the divided nerves at the end of the operation.

Hart and Stewart, and Haynes, have made satisfactory union of the cord in experimental work upon the cadaver, after excising up to 1 inch, aided by the posture of the subject and by the temporary division of nerves.

FRACTURES.

(I) Classification of Fractures as to part of Vertebra involved:

(A) Fractures of the Posterior Arch;

The fracture may involve the spines, laminae or transverse processes separately, or may include them all.

There may be no interruption of the continuity of the vertebral column. Or sunken fragments of bone may compress the cord.

(B) Fractures of the Bodies:

Fracture of the body alone may occur, or may also involve the posterior arch.

There may or may not be interruption of the continuity of the vertebral column, causing modification of the form or calibre of the spinal canal.

(II) Indications for Surgical Treatment dependent upon site and period of Fracture, and upon presence or absence of bone-displacement and of nervous symptoms:

(A) Fractures of the Posterior Arch:

(1) Without displacement—Without nervous symptoms—Immobilization.

(2) With displacement—With nervous symptoms—Operation and removal of compression.

(B) Fractures of the Bodies:

(1) Without displacement—Without nervous symptoms—Immobilization.

- (2) With displacement—Without nervous symptoms—One may either abstain from operation—Attempt to reduce by extension, or expose by operation and reduce.
- (3) Without displacement—With nervous symptoms:
As the nature of the injury cannot be known without exposure, it is better to operate. The advice is often given here to simply immobilize if it be thought that much damage has been done the cord by bone-pressure, and only to operate if the pressure be surmised to be due to hematoma—the idea in the first instance being that the cord is destroyed beyond repair, which is purely theoretical.
- (4) With displacement—With nervous symptoms:
Immediate operation, general condition permitting. Some surgeons counsel differently in these cases. They advise no operation in the Immediate period. In the Secondary period they advise no operation if they judge the cord has been destroyed. Further, in this period, they advise no operation if there be spontaneous improvement, but counsel intervention if the symptoms persist and the fracture is low down, or if there be an aggravation, or if there should be a recurrence of symptoms after improvement.
All these possibilities will be better met by prompt operation.

To summarize: All cases of spinal fracture may be divided into three categories, in so far as the question of cord involvement is concerned; cases in which it is reasonably certain the cord is crushed; cases in which it is fair to assume the cord is compressed or otherwise involved; and cases in which it is fair to assume the cord is not involved by the fracture of its consequences.

It is often impossible to tell whether the cord is injured until the cord is exposed, unless one waits a length of time which will often make the correction of the damage impossible.

Fracture of the spine may occur without giving evidence of the lesion. Crandon collected 17 cases in which there were no symptoms at all.

Only three general methods of treatment are open to the surgeon: The Expectant, Reduction by bloodless methods and fixation, Operation.

The non-operative methods are usually continuous extension, traction in the horizontal position, or vertical suspension.

One would advise waiting a reasonable length of time, to exclude shock and a certain degree of anesthesia often caused by shock; and, if not otherwise contra-indicated, to operate on the second day, as only exposure will reveal the exact condition, and if a harmful condition be allowed to exist for many hours irremediable damage may be done. If, on the other hand, there be no doubt, and the general condition permit, operation should be done immediately.

One should also exercise judgment in being deterred by the general condition, for that is known to be often kept up until the local condition is relieved.

It is fair to mention an opposite view, and that, too, by a surgeon who counsels immediate operation as the only means of ascertaining the condition. Burrell writes, that if the injury be not irreparable at the time of the accident, it is unusual for bony or other pressure to cause permanent abolition of function. This statement, however, is hard to reconcile with known occurrences.

Statistics showing that more patients die who are operated upon immediately after injury than some time after, prove absolutely nothing, as they necessarily include all of those who would have died anyhow, whether operated upon or not, and probably many patients have died without *any* operation who would have been saved by an *early* operation.

It may be impossible to distinguish concussion, compression and rupture of the cord, and while it would be, of course, desirable to recognize concussion before operation, valuable time may be lost in waiting for the diagnosis to be made clear.

Compression, or even destruction of the cord and nerves may occur from hematoma, extra- or intra-dural, or even hematomyelia, resulting from the fracture, or by exudate, and not directly from the fracture itself.

Death from fracture of the spine, outside of rapid death from asphyxia in fractures near the medulla, may result from other mortal lesions simultaneously received, or from septic complications of the skin, urinary or pulmonary organs.

In cases of fracture where the cord is not injured at the time of the fracture, or immediately after, it may be subsequently compressed by callus thrown out in repair, necessitating operation.

As to mortality, fractures of the cervical, dorsal and lumbar regions stand in order.

Those who have opposed operating at all in Fractures of the Spine, have done so upon the question as to whether or not the damage done to the cord in the majority of fractures, is not, from the first, irreparable, even if the pressure of the displaced bone be removed. Such a course would seem to be condemning a certain percentage of patients to death without effort to save them.

There is no recognized technic in operating upon fractured spine. The conditions found in each case must guide the operator, the underlying principles being to remove detached pieces of bone which are exercising pressure, and, where possible, to bring into alignment and retain, partially detached bone. The latter is accomplished by simple reposition alone, or reposition followed by wiring of replaced or sound bone. In either case an immobilizing dressing is applied, the wound being closed in the manner already referred to in preceding sections.

The site of fracture is best approached along the lines of an ordinary Laminectomy in fractures of the posterior arch, and by Osteoplastic Resection in cases of fracture of the body, the general object being to retain as much of the bony structures as possible in the already weakened spine.

DISLOCATIONS.

Dislocation of the spinal vertebræ is caused by the articular process of the higher vertebra gliding downward and forward over the lower. If the gliding has gone far enough to cause the posterior margin of the upper articular process to pass beyond the anterior margin of the lower articular process, where it becomes interlocked, dislocation is said to have occurred, the body of the upper vertebra having glided to some extent over the body of the vertebra below. If the gliding has been less extensive, so that these margins have not passed each other, and interlocking has not, therefore, occurred, subluxation is said to have taken place.

The dislocation may be unilateral or bilateral, the latter always causing cord-pressure.

Dislocation in the dorsal and lumbar regions always involves fracture of the articular processes, and generally also of the laminae, owing to the more nearly vertical position of the articular processes.

Dislocation less frequently occurs by a backward displacement of the upper vertebra, in which the articular processes are merely separated, but this is impossible without rupture of the ligaments, which very rarely occurs.

Dislocation is most common in the cervical region (owing to the play of the vertebræ), usually between the 5th and 6th vertebræ; next, between atlas and axis. It is rare in the lumbar region, and rarest in the dorsal.

Dislocations should be reduced by non-operative measures if possible. If they can not be so reduced, there are those who make no further effort at rectifying the lesion, provided no nervous symptoms be present. If, however, nervous symptoms be present in a case which has withstood non-operative efforts at reduction, operation is then indicated. What has been here said applies to recent dislocations.

If the case be an old one, and there are no nervous symptoms, and no great deformity, it may be let alone. If there be nervous symptoms, or great deformity or discomfort, operation should be undertaken—understanding the increased difficulties in the way of reduction and the likelihood of finding a partially degenerated cord, and the possibility of inflicting additional damage in the operation. These, however, should not deter one from a radical procedure.

The non-operative technic consists in first practicing firm traction upon the column, manual or instrumental, and then, by manipulation, to disengage the interlocked vertebræ and push the dislocated one back into place.

In operating, especially in bilateral dislocation, it is to be remembered that one may expect to find the intervertebral articulation torn, the supraspinous and interspinous ligaments, ligamenta subflava and the anterior and posterior common ligaments lacerated, and the intervertebral substance damaged. The soft parts should be well retracted from the bones, so as to expose the latter thoroughly. By manual or instrumental manipulations, while the spinal column is kept under traction, an effort should be made to return the parts to their normal positions. Failing in this, incision of part of one or both articular processes should be done—after which reduction can usually be accomplished. In completing the operation, the ligaments and other soft parts injured by the original

traumatism and by the operation, should be repaired by kangaroo-tendon suture—the spinous processes may be wired with silver wire—and the back should be supported by metallic or plaster brace.

FRACTURE DISLOCATIONS.

Two forms of Fracture Dislocation are recognized:

- (A) One or both inter-articular joints are dislocated, and there is pressure-fracture of the body of the vertebra.
- (B) Both inter-articular joints are dislocated, and the body of the vertebra is both dislocated and fractured.

Keen states that in the category of cases generally classed as Fractures of the Spine, 20 per cent. are simple Fractures, 20 per cent. are simple Dislocations, and 60 per cent. are Fracture Dislocations.

The Indications for operation may be gleaned from what has been said under this head in the sections upon Fractures and upon Dislocations, the methods of procedure being practically the same.

The injury done the cord in these cases, is naturally, generally greater than in either Fracture or Dislocation alone, and unless the case be absolutely hopeless, the indication for surgical interference is also usually greater, and should be prompt and radical.

Contrary to the views of Bastian, Bowlby, Thorburn and Herter, operated cases have recovered where there were, following injury, complete motor and sensory paralysis and absence of the deep reflexes, under which circumstances they claim operation is useless.

Chipault advises, following the rectification of the injury, to drill the spinous processes, and even the transverse processes and laminae, and wire them.

LUMBAR PUNCTURE OF THE SUBARACHNOIDEAN SPACE.

Three distinct uses have been made of the puncture of the subarachnoidean space of the spinal cord:

- (1) For Diagnosis.
- (2) For Therapeusis, including drainage.
- (3) For Analgesia.

The technic of making the Lumbar Puncture is so well known that further reference to it will not be made, and is practically the same, whether for the withdrawal of cerebro-spinal fluid for diag-

nosis or drainage, or the injection of agents for analgesia or therapeutics. Their applications, however, will be briefly considered.

LUMBAR PUNCTURE FOR DIAGNOSIS.

This comparatively recent aspect of Lumbar Puncture is an important, if not distinctly the most important, bearing of the operation, and is based upon the examination and interpretation of the fluids, and especially the suspended solids, physiological and pathological, withdrawn from the subarachnoidean space by puncture with needle or fine trocar.

These examinations embrace several fields of inquiry:

(1) Physically: For characters presented in such conditions as meningitis, jaundice and hemorrhage (either intra-cranial or intra-spinal). Cryoscopy of the cerebro-spinal fluid has been practiced, especially in meningitis, where the freezing point has been reported as lowered.

(2) Chemically: For characters present in such conditions as meningitis, general paralysis of the insane, and some degenerative lesions of the brain and cord.

(3) Bacteriologically: Chiefly for the purpose, at present, of determining the variety of micro-organisms in a special case of meningitis.

(4) Microscopically: Not only is the centrifuged fluid examined for bacteria, but also an especially important bearing of the microscopic examination is the determination of the type of leucocytes (Cyto-diagnosis proper), particularly under such circumstances as in the differentiation of acute and chronic meningitis, and in syphilitic and post-syphilitic involvements of the central nervous system.

A particularly valuable bearing of the diagnostic possibility of lumbar puncture for the surgeon is in intra-cranial and intra-spinal hemorrhage from no matter what source. For instance, in a suspected fracture of the spine with wounding of the cord, bloody cerebro-spinal fluid would be rather corroboratory. Again, in a case of unconsciousness, bloody fluid drawn by lumbar puncture would argue more strongly for intra-cranial hemorrhage than for thrombosis—and such a case of hemorrhage is recorded as diagnosed by this method, operated and saved. No better illustration of the value of Lumbar Puncture for diagnosis could be mentioned than

the report of Cushing, of two young men thrown from a tandem motor-cycle in a race, with severe cranial injuries. Both were subjected to lumbar puncture for diagnosis, and both yielded bloody cerebro-spinal fluid. One had his skull trephined low down, with the evacuation of a considerable amount of bloody fluid and clots. He was up in 48 hours, and shortly left the hospital well. The other was not operated, remained in the hospital a month, suffering the usual phenomena of such injuries, from which he never completely recovered.

In making the puncture for diagnosis, it should be made as low as possible, between the fifth lumbar and first sacral, in order to get fluid rich in sediment.

LUMBAR PUNCTURE FOR SPINAL ANALGESIA.

Spinal Analgesia, recently somewhat extensively and enthusiastically used, has now been largely abandoned as being more unsafe than general anesthesia, more unpleasant in many instances, and as a retainer of consciousness during operation, an undesirable thing in itself, without in exchange affording greater safety to the patient.

Berger and Hartmann, in their recent authoritative work upon the nervous system, state that the fatalities and disagreeable consequences and inconveniences of spinal analgesia have caused the greater part of the profession, even many of its former strong partisans, to abandon, for the most part, its use; and that, too, writing from France, where it was so largely used.

Gumprecht has recorded 17 sudden deaths even from lumbar puncture for diagnosis, which is generally supposed to have no mortality at all.

Personally the writer has never been in touch with this form of anesthesia, but it is fair to say he has never done a case, seen a case abroad or at home, not even heard, up to the writing of this paper, any one have anything to say in its favor. He, therefore, made it a point last week to get the views on this subject of Bennet, of New York, a man pre-eminently at the head of his profession as a special anesthetist, in this country if not in the world—a true artist as well as a wonderful man in his work—with a personal record of between 21,000 and 22,000 anesthetics without a death, and a man who, during its day, and before the weight of

surgical judgment turned against it, used spinal analgesia as well. He condemns the use of spinal puncture for analgesia *absolutely* and without *exception*, holding that there are *no* cases of any kind which are contra-indications to general anesthesia, as there are no cases of heart, lung, kidney or other involvement in which a skilled anesthetist could not warrantably give general anesthesia.

The argument of the writer is that unconsciousness is desirable, and that the contra-indication to the use of general anesthesia may be overcome in those cases in which spinal analgesia is now used, by such administration of general anesthesia as is practiced by those who make a specialty of anesthetizing, and this argument, though a digression from the subject in hand, might offer encouragement to at least one or two young men in every city of more than a quarter of a million of people, to devote themselves, in large part, as is now done in whole in large cities, to the administration of anesthesia.

LUMBAR PUNCTURE FOR THERAPEUSIS, INCLUDING DRAINAGE.

The chief applications of lumbar puncture therapeutically, through drainage, are either as a cerebro-spinal "decompressive agent" alone, as where the accumulated fluid is harmful only because of the pressure exercised, as in Hydrocephalus, or as a combined decompressive and evacuant agent, as where the fluid is also harmful because of its quality, as in suppurative meningitis.

Lumbar puncture for drainage, therefore, has been used in such cases as Hydrocephalus; Acute, Tubercular and Cerebro-Spinal Meningitis; Cerebral Abscess; Intra-Cranial Tumors, Uremic Coma and Convulsions; Syphilitic Headache; and in some auditory troubles of labyrinthian origin.

The chief application of lumbar puncture as a means of injecting the subarachnoidean space has been in the use of anti-tetanic serum.

(*To be concluded in the April JOURNAL.*)

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Secretary, DR. AMEDEE GRANGER.

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In Charge of the Publication Committee, DR. AMEDEE GRANGER, Chairman.

DR. HOMER J. DUPUY and DR. E. O. TRAHAN.

MEETING OF JANUARY 26, 1907.

DR. HOMER DUPUY read a paper entitled:

Successes and Failures in Intubation—Exhibition of a Case.

Knowledge is the sum of individual experiences. This is peculiarly so in the science of medicine and it is this personal element in my paper that gives it some value, even in view of the fact that the data collected and analyzed are unavoidably limited and in the nature of things cannot represent the whole truth. These general considerations on a subject of undoubted interest to every physician are largely based on my own personal observation in a series of a half hundred cases of acute laryngeal stenosis requiring instrumental or surgical aid.

It is not my purpose to discuss the details of the operation, but I cannot omit touching on a few points which, in my experience, contribute to successful intubation. That one of the prime factors is the skill and experience of the operator himself, is readily appreciated when we come to realize the technical difficulties of the procedure. Even the qualified operator may in certain instances meet with insurmountable obstacles. To one not accustomed to the handling of these parts, intubation becomes a Herculean, if not an unsuccessful, effort. Sometimes a good fortune attends us and in exceptional instances the tube penetrates the obstructed glottis so readily that the veriest tyro succeeds and is elated. But the second or the next experience with cases presenting the average difficulties quickly and rudely awakens us from this fancied mastery of intubation after only one or two trials.

While the technical skill of the operator is always taxed, his

good judgment in selecting a tube for each individual case is a very important item. The graduated scale is only approximate and if invariably adhered to will deprive us of success.

The size and physical development of the child must be considered in the selection of a proper tube. The larynx shares in the general development of the subject and the simple question of age cannot therefore prove an infallible guide. I offer evidence of this by the tabulation of several cases in which I used the 6-year size in a child of four and a 4-year tube in a subject of two or thereabouts.

The age in itself of the patient has proven a determining factor in my results. I found it more difficult to intubate the one-year old subject than the child of four and five. The latter periods are regarded as ideal for satisfactory and rapid intubation.

Technical skill, a proper sized tube, a favorable age, all these will often fail us if the opportune moment for intubation slips by. That there is such a moment is witnessed by the many brilliant results as well as by the pathetic failures.

To fully recognize the favorable time for interference in acute laryngeal obstructions, we must have adequate knowledge of the danger signals when they appear. Let me merely outline a picture which all must recognize.

Hoarseness, a metallic cough, noisy breathing, some inspiratory stridor, here are the usual precursors in the more serious laryngeal affections. As the disease progresses in intensity, we have the spasmodic attacks of dyspnea, apparently threatening life itself, yet really seldom fatal; these appear and disappear during a longer or shorter period, until we reach the fixed laryngeal stenosis manifested by slow, labored and whistling breathing. The indrawing of the parts in the supra-sternal and infra-sternal regions (tirage, from the French, well expresses it), are constant and characteristic phenomena of this stage. At first this tirage, or sucking in of the soft parts, is slight, but it invariably and progressively becomes more marked as the laryngeal obstruction increases, and in fact it can be taken as a measure of the degree of the stenosis. The want of oxygen is becoming felt, the child is restless and irritable, the dyspnea becomes more intense, the respiratory accessory muscles come into play, the heart action is rapid, cyanosis of the extremities is quite visible, there is exhaustion, toxemia and

drowsiness. We have indeed reached the stage of asphyxia and the death struggle is on.

While these phenomena appear successively, the interval between the initial laryngeal symptoms and the stage of asphyxia varies indefinitely. The appreciation of this fact is not infrequently life-saving.

It is noteworthy that since we are giving large doses of the anti-diphtheritic serum, the resolvent action may attain its maximum effect suddenly, in a rush, as it were, and the detached membranes may hang loosely in the larynx, thus infringing on its lumen, with a suddenness which alters the whole clinical picture in the twinkling of an eye. A child, affected with slight dyspnea, may thus without further warning enter the stage of asphyxia. Intubation, under these circumstances, may further loosen the membranes, which may be expelled during the manipulations, or the tube itself successfully irrigates the sub-glottic area.

It is now pertinent to ask if there be any one sign which can serve as a guide when to intubate. We can undoubtedly accept as a dictum the statement that *persistent and progressive dyspnea calls for operative relief*. The exceptions do not weaken my belief that this is the only safe and constant guide.

A case is seen in the morning at six o'clock, presenting already some dyspnea of laryngeal origin. There is slight supra-sternal tirage, some sinking in of the epigastric region is also observed. We return in less than or in six hours, the indrawing of the soft parts in the regions indicated has markedly increased. This increase in the tirage is the signal of distress and here is the time of selection for skillful and intelligent assistance. Whether or not we are dealing with diphtheria, whether or not we have administered antitoxin, to defer operative procedures at this period is to take unjustifiable risks and to court death. Were further evidence required to urge us on to intubation, the rapid and weakening heart action, repeated and violent paroxysms of dyspnea, the apparent failure of antitoxin to improve the condition, are all unmistakable arguments for interference.

A word regarding antitoxin. If it has been administered in large doses when the dyspneic symptoms first appear and when these progress slowly in degree, we may not be jeopardizing the life of our patient by waiting the action of the serum, provided we

are immediately prepared to secure the services of an expert intubationist. The attending physician to protect himself and to insure the welfare of his patient, will show greater wisdom if he call into consultation one more familiar with laryngeal affections. With such assistance, at an early period, the patient can be watched, every advance of the disease may be closely observed, and should interference be indicated, there is apt to be no regrettable delay.

Before the stage of asphyxia is reached is then the most auspicious time for intubation, for the further reason that the child is in a physical condition to stand punishment. There is no need for hurry and excitement. The intubation is then practised with care, deliberation and safety, all of which largely contribute to success.

Now as to the failures of intubation. Some of the causes of these have already been hinted at in recording those factors which make for success in the operation. Unskillfulness and inexperience are patent first cause. But in these days of specialization, in this particular operation, the unprepared need not rush in where even the more skillful should tread lightly.

Our failures are due, and I wish to emphasize it, more especially to the utter disregard of this all important fact that persistent and increasing dyspnea calls for operative help. The danger signals just indicated are not appreciated at their full value. The technical difficulties of intubation are immeasurably increased when the subject is exhausted by labored breathing and devitalized by want of oxygen. The handling of the patient and the intubation in itself, produce some shock which, when life is at a low ebb, may positively hasten the fatal end.

A great fallacy is to expect too much from the anti-diphtheritic serum. Every case of acute laryngeal stenosis is not necessarily diphtheritic, and even should the initial lesions be such, we have unmistakable instances of mixed infections. In such cases the serum is powerless to completely relieve the local condition and the obstruction continues.

Again the antitoxin requires some eight to twelve hours, particularly in the laryngeal infections, before its resolvent action makes itself felt. To procrastinate in the presence of increasing dyspnea, awaiting the probable action of the serum, is to invite failure when we attempt intubation.

A most important phase of the subject is that relating to those inflammatory affections, either diphtheritic or non-diphtheritic, extending along the laryngeal and tracheal surfaces, or to that form limited to the trachea itself, and, lastly, to that exceptional extension of the disease from below upwards. If my deductions are correct, I have observed several cases of this nature. Dyspnea, with tirage, were constant features, and the intubation absolutely failed to relieve the condition. The situation is all the more serious from our inability to recognize the exact seat of the trouble. In fact, we have no infallible sign to guide us in selecting the cases suitable for intubation.

The existence of dyspnea, with the child's voice clear in tone, rather indicates in my experience that the stenosis is either sub-glottic or is limited to the tracheo-bronchial surfaces. There are of course very unfavorable cases for intubation. On the other hand, when the lesions involve the larynx itself, with probable extension below, aphonia is ever present. In such instances, intubation is simply on trial. The tube may fail to get below the stenosed area, or the loosened membranes in the trachea may be pushed upwards against the lower end of the tube.

In those rather rare instances, I observed four such cases, in which the trouble seemed to begin below, the clinical picture is that of broncho-pneumonia, with its rapid breathing and high temperature. As the affection spreads upwards, the dyspnea assumes other features; the sucking in of the soft parts, above and below the sternum, the dysphonia, gradually and successively appear. Their absence at the onset, when the rapid breathing proves the most noticeable feature, argues that the trouble begins at the lower bronchial regions. In three cases I have noted a sinking in of the whole sternum at each inspiration. Is this phenomenon constant when the trouble is lower down? Does its presence militate against intubation? Further observation will be required ere we can answer this. But it is worthy of investigation and I present it to your notice. In all of these cases, with the diseased focus lower down, both intubation and tracheotomy failed me.

A plea for early intubation is the very keynote of this paper. Even our success at the late and inopportune hour, when we saved life only after the most strenuous efforts, with the odds terribly

against us, argues for less delay, diminished risks and surer results.

Would that I could impress this on every physician, as it would mean the saving of a few lives.

Remember, that even antitoxin cannot render intubation a lost art. To call for help, however, when the child is in an almost moribund state, is to expect intubation to work a miracle.

Negligent and ignorant parents, the existence of a primary laryngeal diphtheria, unrecognized because of no visible lesions in the throat, an over-confidence in the rapid action of antitoxin, the possibility of mixed infections, and the positive existence of non-diphtheritic pseudo membranous croup, all these will continue to jeopardize life and must perforce demand the assistance of intubation.

DISCUSSION.

DR. DUPAQUIER: The discussion of interference by intubation centers around the character of the respiration and of the circulation. Assuming that the diagnosis is diphtheria, if the laryngeal or croupy breathing is from obstruction due to diphtheritic membranes, primarily formed in the larynx, in other words, if the case is a diphtheric croup d'emblée, there is no hesitation to be had, no delay is permissible, antitoxine alone cannot be depended on, intubation is absolutely indicated. I would never wait for the dyspnea to merge into the stage of asphyxia as Dr. Dupuy says. But, if the dyspnea with "tirage" or "drawing in," even with retraction of the suprasternal notch, occurs in a pharyngeal case, I would not altogether and at once think of intubation. This dyspnea, persistent and increasing dyspnea, is often a cardiac dyspnea, the natural sequence of diphtheria poisoning and I would, at once, test the treatment for cardiac asthenia and hypotension. I have had cases to convince me that retardation of pulmonic circulation from acute myocardial insufficiency due to the diphtheria toxin was the cause of the dyspnea, cardiac dyspnea simulating at times laryngeal dyspnea.

This differentiation is paramount, for, in cases like this, intubation would be the worst thing possible, since the exertion and more or less shock caused by the operation, though skillfully performed, will tell on the already weakened heart; whereas, in

treating the heart the dyspnea will be bettered. Of course, if no response to the treatment comes in a few hours intubation is indicated since *in such cases the suspicion is warrantable that there was diphtheritic invasion of the larynx* (Koplik).

If the case is seen for the first time, if no diagnosis is certain, the laryngeal breathing may be due to spasm of the glottis, acute laryngeal catarrh, edema due to tubercular or syphilitic ulcers in the pharynx, epiglottitis, or to some suppurative process, etc., and, while in cases of that kind, intubation is indicated as well as in diphtheritic obstruction, yet we have no urgent necessity, as in the case of laryngeal diphtheria, for intubation. Indeed, the respiration and circulation, in these instances, can be bettered by other appropriate measures, viz.: Cold water, cupping, leeches, applications to ulcers, specifics, and the bistoury, measures just as prompt as antitoxin.

My experience in the severe laryngitis accompanying the measles rash proved that where as intubation in such cases is indicated, yet domestic measures, such as cupping and hot mustard foot bath well given, may relieve the stenosis. Most recent case seen on Bourbon street, so severe croup with measles that child was seen three times in an hour and a half. Specialist expected to be called to intubate if measures had failed.

While in the majority of cases retraction of the suprasternal notch is characteristic of laryngeal dyspnea, it is seen, too, in severe acute pulmonary disease, especially in children, in emphysema in asthmatic attacks (Sahli's Diagnostic Methods).

Summing up, in true croup, *d'emblée*, early intubation, as early as you see the case. I fully agree here with Dr. Dupuy.

In so-called secondary croup it were better to discriminate and think of the possibility of cardiac dyspnea, and to treat the heart first. Of course, antitoxin in increasing doses is administered also. These are the only remarks I saw fit to present and which I picked out of the notes made on reading the very good paper of Dr. Dupuy.

DR. DE POORTER: In this advanced stage of medical science, owing to the advent of antitoxin for the prevention and cure of diphtheria, the expert in intubation is far less frequently called in, and his skill less often employed for the relief of laryngeal stenosis.

Nevertheless, the few cases that have come under my observation during the last few months have very forcibly impressed upon me the necessity and advantages to be derived from an early and prompt relief through instrumental or surgical aid for this most distressing and serious condition. Though advocating and insisting upon an early intervention, I must not overlook the fact that in the majority of instances the physician in attendance has been but recently called, perhaps only as the dyspnea is on the increase, and to shoulder upon him a burden and a responsibility for which he is entirely innocent, is both unjust and unfair. Rather look to the members of the household, those responsible for the safety of the patient, if at the last hour our efforts and our labors for the relief of the dyspnea result disastrously.

Even at the hands of the expert intubation becomes at times a most difficult and hazardous procedure, requiring much skill, much patience, and at times careful and delicate manipulation, so as to avoid all unnecessary traumatism to an already inflamed and edematous mucous membrane, and to keep as much as possible the fast waning strength, and very often of already exhausted patient.

As to the proper time for intervention there is a diversity of opinion, but all do agree that persistent and increasing dyspnea does call for remedial measures, instrumental or surgical, which the urgency of the case might demand. Of the symptoms ever present and most pronounced in laryngeal diphtheria, and for which interference is absolute, is dyspnea, with its cough, restless, rapid pulse and fast disappearing strength of patient. To appreciate the degree of dyspnea present it is best to have patient stretched on its back and to watch the amount of pulling, as it were, or retraction of the abdominal walls. Such a condition demands immediate attention in the form or manner best suited to the individual case. Now, as the age of the patient as guide to the size of the tube to be introduced in the larynx, on two occasions I found it necessary to make use of a tube graduated for a child of six years into that of a child of three years, and one for eight years into that of a child of five.

The relief upon intubation, if any, will be apparent in a very few minutes. I will not go into the details nor the technic of intubation, but as illustrating the advantages and successes fol-

lowing early and timely intubation, I will cite a series of 13 cases seen by me in Oct., Nov., Dec., of dyspnea due to laryngeal stenosis.

CASE 1. White male, 2 years, seen by family physician three days before. I was called in the forenoon. Restlessness; marked dyspnea; pulse 170; intubation, successful; tube in situ 6 days; extubated; antitoxin 20,000; recovery by patient.

CASE No. 2. White male, 2½ years, seen by family physician in the morning. Was called in afternoon; marked dyspnea; pulse 164; intubation; tube in situ 2 days; patient extubated himself; not reintroduced; no dyspnea; recovery; antitoxin 12,000.

CASE No. 3. White female, 3 years, seen by family physician one week; antitoxin freely; saw child on 7th day; intubation; tube in situ 24 hours; coughed up; reintubation necessary on 7th day; extubation; antitoxin 18,000; recovery.

CASE No. 4. C. M., 7 years, seen by family physician for one week; no antitoxin; was called on 8th day; marked dyspnea; pulse 140; intubation; antitoxin 22,000; two days after tube became no longer effective; removed and reintroduced; no results; tracheotomy; tube removed on 7th day; no broncho-pneumouia; recovery.

CASE No. 5. W. M., 8 years, seen by physician unknown; saw child on 10th day; tonsillar and laryngeal diphtheria; marked dyspnea; pulse 160; very restless; intubation; in situ two days when coughed up; reinserted; in situ 24 hours; reinserted; no relief; tracheotomy; antitoxin 26,000; recovery on 20th day.

CASE No. 6. W. F., 6 years, seen by physician in morning; was called in afternoon at 4; restless, pulse 230; dyspnea; intubation; tube in situ 4 hours; cyst expelled will tube; reintubation not necessary; 16,000 units; discharged 3 days later.

CASE No. 7. W. M., 6 years, seen two days before by physician; antitoxin 18,000; called at night; marked dyspnea; restlessness; pulse 140; intubation; in situ 5 days; extubation; recovery.

CASE No. 8. W. M., 10, seen by family physician for one week; 19,000 units; dyspnea marked for 12 hours; very restless and tossing about bed; signs cyanosis; tracheotomy; tube removed on 7th day; recovery.

CASE No. 9. W. M., 1½ years; diagnosis of croup; antitoxin 10,000; diphtheria confirmed by culture; seen by physician for two days; called in on 3d day; dyspnea slight; pulse about 180; intubation; 3d day tube removed by thread left attached; recovery.

CASE No. 10. W. M., 7 years, seen by physician and diagnosis diphtheria; antitoxin 12,000, 3d day; marked dyspnea; pulse 158; intubation; in situ 8 days; extubation; recovery.

CASE No. 11. W. M., 5 years, seen by physician on fourth day of illness; dyspnea present; restlessness; pulse 140; antitoxin 10,000; called in on 5th day; dyspnea increasing; chill; cyanosis; died before intubation.

CASE No. 12. W. M., 3½ years, seen by physician for one week; no antitoxin; on 8th day I was called in; dyspnea; restlessness; pulse 170; antitoxin 6,000; intubation; tube in situ 12 hours; expelled in 2 hours; reinserted; expelled in 5 hours; larger tube; in situ 5 days; expelled; reinserted and no relief; tracheotomy; antitoxin 6,000; broncho-pneumonia, oxygen and stimulants; on 22d day tube removed and discharged cured.

CASE No. 13. W. M., 3 years 8 months, seen by physician for one week; called in on 7th day; dyspnea; pulse 150; intubation; tube expelled; reinserted and 6 year tubes used; in situ 3 days; on 4th day tube gave no relief; tracheotomy; broncho-pneumonia; oxygen and stimulants; child made complete recovery.

CASE No. 14. W. M., 6 years, sick 5 days, seen by physician and myself on 5th day; laryngeal diphtheria; marked dyspnea; pulse 180; cyanosis; tracheotomy; died ½ hour after operation.

As you will see from the histories of the above, the cases seen at the very commencement of the dyspnea gave no trouble, and the relief was immediate. Another singular instance was that out of the 14 cases only two were females.

DR. McSHANE wished to thank Dr. Dupuy for the emphasis laid on early intubation in laryngeal stenosis. Intubation enables a child to bridge over a very acute period, but ultimate recovery presupposes a strong heart and a sound nervous system. When the laryngeal stenosis is marked, it is bound to increase the burdens of an already overtaxed heart, and, by interfering with sleep, exhausts the nervous system. Every moment taken off from the period of labored breathing means a gain for the patient by husbanding his strength and aiding him in his struggle with the toxins of the disease. Dr. Dupuy has done well in furnishing a clear clinical picture, that should serve as a guide to the conscientious physician in deciding when it becomes his duty to call in the aid of a laryngologist. Delay then means increased danger to

the little patient, and prompt action both protects the attending physician and vastly improves the chances for ultimate recovery.

An experience in intubation extending over about fifteen years has taught him that it is prudent (except in extreme cyanosis) to try first to introduce a tube one size larger than the one indicated on the age scale. Even if the cricoid cartilage does not oppose the entrance of the large tube, there is still time enough to introduce the next one in size when, as not infrequently happens, the intubator, on arriving on the scene, finds a cyanosed child, unconscious and gasping about five or ten times a minute. He has no time for tentative manipulations, but should introduce any size of tube that will furnish oxygen to bring the patient back to his senses; and as soon as this happens he begins to cough out a large mass of thick muco-pus that had been gathering in the trachea and bronchi for several hours. The laryngeal stenosis is responsible for this mucous accumulation, for the patient gradually drowns himself in his own tracheo-bronchial secretion when the expulsive efforts have become too feeble to overcome the narrowing at the rima glottidis. In this connection Dr. McShane recalled several cases that were apparently moribund, and yet eventually made excellent recoveries. In one case, referred to him by Dr. W. T. O'Reilly, the boy (23 months old) was unconscious, blue as the sky, and gasping occasionally. Intubation was quickly performed, and artificial respiration practiced until the lips were cherry-red; then he did his own breathing. The ease with which the tube (O'Dwyer's) was introduced, was remarkable. A few days later the doctor was hurriedly called to replace the tube, which had been coughed out. Some difficulty was at first experienced, and it was only at the sixth attempt that the tube was reinserted; and by that time the child was blue and unconscious.

This very unusual experience was, in a measure, repeated in a case referred by Dr. E. M. Dupaquier, and caused the doctor to cast about for an explanation of the phenomena, with the following result: The cyanosis reveals a saturated condition of the blood with nature's anesthetic—carbon dioxide. The apparently moribund patient is in the most favorable condition for intubation, i. e., a state of profound anesthesia. Operating in this condition is almost as easy as operating on a cadaver, in that the patient does not kick or struggle. When the blood has once more received a fair supply of oxygen the sensibility of the mucosa returns, and the

reflexes are again as active as ever, with the result that the operator no longer has a perfectly passive, inert mass of matter to deal with.

Dr. McShane's youngest case, referred by Dr. S. G. Gill, was fourteen months old. That was before antitoxin came into use; O'Dwyer's set was used; and recovery ensued. The oldest case (of laryngeal diphtheria) was about nine years old. A few cases of intubation in the adult have also fallen to his lot, among them being (1) a case of laryngeal gumma in a negress of about 32 years, (2) a young white man with paralysis of the posterior crico-arytenoid muscles, and (3) a unique case of abscess of the anterior wall of the trachea, visible as a rounded tumor in the laryngoscope. This last case (referred to him by Dr. Dupaquier) was suddenly relieved by a copious discharge of pus from the trachea after intubation had been attempted with tubes of different sizes; each tube met an obstruction and was arrested in its course. The sudden bursting of the abscess entirely relieved the dyspnea and rendered further instrumentation unnecessary.

In practice Dr. McShane has found Farroud's instruments to be an improvement on O'Dwyer's. This is no disparagement of the latter, but actual experience has caused him to prefer the former.

Dr. McShane reminded his hearers that diphtheria patients themselves elaborated a protective antitoxin, even while the destructive toxin was being poured into the blood. There is a constant struggle between the morbid elements and the stored up vitality of the patient. When the heart muscle has not become the seat of degenerative changes, the patient is not yet to die. When this citadel of life has become undermined, then all our efforts are in vain. If, then, we can only maintain an adequate supply of oxygen, the patient will manufacture enough antitoxin to pull through; and the earlier we come to the relief of a patient struggling for breath, the greater will be his chances for recovery, and with diminished likelihood of complications.

DR. DUPUY, in closing, said he was sorry that Dr. Dupaquier had made no mention of those patients suffering with the essential form of diphtheria, cases in which the disease begins in the larynx and ascends to the pharynx. He had made a point in his paper that some cases, beginning with broncho-pneumonia symptoms, and later entending in laryngeal dyspnea, where intubation was performed, had failed to give relief.

The average physician looks in the throat, and seeing no membrane, he concludes that there is no diphtheria, and gives no antitoxin. He wished to again urge the necessity for intubation before cyanosis occurs, in cases of diphtheria becoming of a laryngeal type, where medicine and antitoxin have failed to give relief.

Although it is perfectly true, as stated by Dr. McShane, that the most successful cases for intubation, from an instrumental point of view, were cases in children who were perfectly cyanosed, it stands to reason, and we should remember, that children in that condition have a weak heart, that the slightest interference is sure to cause severe shock, and may, and does, often defeat the purpose of the intubation. In all cases of increasing laryngeal dyspnea which persist, in spite of antitoxin and all treatment, we should intubate at once, unless, of course, the dyspnea be clearly of cardiac origin.

DR. JULES LAZARD exhibited a case of

Carbolic Acid Gangrene of the Penis (Partial).

This case is presented to the Society to-night because of its rarity, and to illustrate the point that a patient treating himself shows poor judgment in the selection of a physician.

G. B. A., aged 34, bar tender, admitted to Ward 5, Charity Hospital, December 21, 1906.

The family history has no particular bearing on the case.

Previous History: Yellow fever 1878; grippe 1890; gonorrhea 1888, remaining chronic for five or six years, finally clearing up; chancroid 1895, on the frenum. A scar remained after cure, which took about sixty days.

Present condition: Four weeks before admission a chancroid made its appearance in the region of the old scar. As the prepuce was somewhat elongated, the ulcer was reached with some difficulty and pain. Nothing was done for five days after its appearance. About this time he accepted the suggestion of a friend (these are present on all similar occasions) and applied carbolic acid, diluted to prevent crystalization, by means of a rag swab about the size of the little finger nail, placed on the end of a stick. This swab was applied at night beneath the prepuce, and allowed to remain

until morning, when it was removed. He used this treatment every night for two or three weeks, until one morning, while in a café, he noticed a gush of blood from the penis. He returned home. On the next day he was admitted to the hospital.

Examination on admission revealed a man in very much pain. The penis was very much swollen, about three times its normal circumference. Very painful, with a discharge of blood of putrid odor. As it was impossible to retract the foreskin, the exact condition was not known at this time. Ice bags and antiseptic poultices were applied, and opiates given to relieve pain.

On December 28 he was given chloroform. Prepuce removed, the same as in circumcision, sheath of penis incised and the gangrenous sloughs were removed. The glans penis was intact, about two inches of the corpora cavernosa and spongiosa had sloughed away. The finger removed the mass without difficulty. A catheter was placed through the remaining urethra into the bladder.

Examination to-night will show a pale glans penis hanging like a tag. This is held to the remainder of the penis by the sheath of the cavernous body, which can be felt behind the glans as a thin, flat, ribbon-like connection. The corpora cavernosa and spongiosa are missing. Urethral opening may be found about the middle of the pendulous portion, producing a condition of hypospadias. If the anatomy of the penis is remembered, the anemia of the gland is due to the lack of blood supply of the spongy body of which it is a part.

This morning he had an erection for the first time since the operation, the glans hung as a lifeless appendage, and may prove to be an impediment to successful coitus.

The glans was left remaining at the time of the operation, because consent to amputate the penis was not given or solicited, and also to follow the laws laid down by conservative surgery, to "save all you can."

It may be necessary to remove the glans later, but not until a thorough test of its supposed uselessness has been tried.

DISCUSSION.

DR. ASHER: There was one point, especially, in the paper, of deepest interest to him; that was the evil of self-medication, and

he did not believe that too much pains could be taken to properly impress the fact upon the laity.

DR. J. B. ELLIOTT, JR., reported

A Case of *Dermatobia Noxialis*.

Mrs. A. came to my office December 10, 1906, complaining of an itching just above her right elbow, and just underneath her right knee. She said lumps had been forming in each place for some weeks. Remembers having been bitten in these regions while on a steamer just as she was leaving Honduras for the States. On examination I found in each region a lump about the size of an English walnut, and in its center an opening from which escaped clear mucoid material. Recognizing that some parasite must be present I used strong pressure, and with the aid of a pair of forceps delivered these worms which you see. Looking up the literature on the subject, I find under "Tropical Myiasis" in Manson, a description of the "*Dermatobia Noxialis*", which undoubtedly corresponds to my case. Matas and Joachim, of this city, report similar cases. The worm looks much like the ordinary screw worm of cattle, and is called in the Spanish countries the "ver macaque," and in Mexico the "moyaquil." The natives in the tropics, so I understand from Drs. J. J. Archinard and P. L. Cusachs, when harboring these larvæ, entice them out by holding near the mouths of the tumor a lighted cigar, or place over it a piece of moistened tobacco. I regret that I did not make a differential blood count in this case, as I should have found a great excess of eosinophiles. The article by Matas in N. O. MEDICAL AND SURGICAL JOURNAL, in 1887, gives a full account of similar cases, and should be referred to.

DISCUSSION.

DR. J. J. ARCHINARD stated that he had seen over a hundred of those cases. They are very common in Central America. The condition is produced by a fly which deposits her eggs on man and cattle. When hatched the larvæ penetrate the skin. It is cured by the natives by placing a chew of tobacco over the affected part. He called the attention of the members to the shape of the little worm, and to the fact that it had snail horns.

Communication.

Insurance Fees.

New Orleans, La., February 15, 1907.

To the Editors of the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL: Dr. Wiley R. Buffington, of Yellow Pine, La., has called my attention to contract being offered to physicians in this State by one of the great insurance companies. This contract, binding for two years, obligates the medical examiner entering into it to abide by the "schedule fees" of the company. Those who do not desire to place themselves at the mercy of the insurance companies in the matter of compensation should scan carefully all contracts of this kind offered to them. Respectfully,

(Signed)

HENRY DICKSON BRUNS, M. D.,
President La. State Medical Society.

N. O. Medical and Surgical Journal

Editorial Department.

CHAS. CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

The Scope of a Hospital.

It is interesting to read the accounts of early hospitals and their struggles before the public for recognition as worthy of philanthropic support. Even fifty years have witnessed a wonderful alteration in the detail of hospital routine, and the younger generations of medical men have seen the gradual disappearance of hospital horrors. To-day the hospitals of any large city emulate each other in the high class of domestic, medical and surgical equipment, and in the greater cities wonderful institutions have grown upon individual, sectarian, or even municipal interest in the public health.

The development of medical and surgical advance and achievement has been consistently dependent upon the increased opportunities afforded in better hospitals and the resultant benefits to the public have grown more and more. The proletariat committed to a hospital a few years ago looked upon the prospect as full of menace, and always feared the outcome. Hospitals then were largely the refuge of the worst elements in the community or those absolutely pauperized. To-day the hospital is held as better than the home in emergency, and by some it is sought even in mild illness as affording the best in care, medical and nursing.

But these things have only come about by the constant elevation of hospital detail to a point way above the old-time careless neglect, and this applies to the equipment of the human agencies above all. The trained nurse has brought some order into hospital management, but the restrictions which first govern the requirement and afterwards the conduct and application of the resident staff make the service in most first-class institutions nearly perfect.

The archaic distribution of hospital practice among undergraduates has not had any vogue in places other than New Orleans for

now some thirty years. Regular graduates of recognized medical colleges are permitted to serve as internes after rigid examinations, which always prove searching and differential, as the applicants are always much more numerous than are the vacant positions.

New Orleans has been slow to follow hospital methods as practiced elsewhere, and our great Charity Hospital has largely failed in some parts of its usefulness because of its isolation and insularity. There is no doubt it has served a broad purpose in the educational system, and particularly in opening its wards to student internes, but it would seem that the time has come for a reorganization of the hospital regime.

In this regard it is timely to refer to the medical organization proposed for the new Touro Infirmary just opened for medical and surgical work. So excellent is the plan proposed that it deserves our notice. The Touro Infirmary will be governed by an Advisory Committee, the personnel of which is to be composed of almost equal representation from the medical staff and the Board of Managers. All matters relating to the medical interests of the institution shall be referred to this Committee. The detail of the hospital and outdoor medical, surgical and special services is directly under the supervision of the Executive Committee of the medical staff, which is elected by the visiting physicians and surgeons, and finally confirmed by the Advisory Committee, and through their Committee by the Board of Managers. The interne staff consists of graduated physicians arranged in Junior and Senior services, and assigned to distinct divisions in the hospital and outdoor departments.

The occupation of a new and modern hospital seemed to have necessitated a renovation in the plan of administration, and the best possible response to such a demand appears to have been arrived at.

We feel that the medical contingent of Touro Infirmary deserves commendation for the plan devised, and from the exact care evidenced in the proposed arrangement the application of the plan would seem to promise success.

The contrast with the Charity Hospital methods must at once strike our reader, cognizant with the prevailing vogue. Not only is the visiting staff deprived of any voice in the hospital administration, but also is it evident that their relation to the Hospital

is less than secondary, and at best perfunctory. The interest of the individual is dependent solely upon his opportunities and the will to use them, always under the limitations prescribed by a policy which at present relieves the same individual of responsibility in large degree, and deprives him of authority almost entirely.

The evolution of medical education in New Orleans, and the demand for better public service in hospital facilities and methods, already acknowledged and met by Touro, must in a short time create the necessary interest on the part of those in authority at Charity Hospital, who certainly cannot be more blind than we are to see the needs and to meet the deficiency of them.

The political origin of a Hospital Board of Administration should not color the response to a repeated demand for the elevation of the medical staff and, if example has hitherto been wanting, we would recommend the Charity Hospital Board of Administrators to study the reorganization of the Touro Infirmary and to take the lesson to heart.

Walter Reed and James Carroll.

The general public is supposed to recognize how much good is accomplished by the medical profession as a whole, and some of its eminent workers in particular; orators are prone to entertain us with exaggerated laudatory remarks concerning our attainments and achievements; yet there is no set of people for whom less provision is made in their old age or who obtain less practical and tangible recognition for important services.

The lamented Walter Reed furnishes a notable example of the truth of the above statements. Few men have labored more for the good of the race in the short period allowed him, and few have accomplished so much in a practical way, yet it has been a huge task to raise a moderate fund, the interest upon which is to aid his widow during her lifetime, the principal to be used to build later a suitable monument to his memory.

Among the living Dr. James Carroll furnishes another illustration. Attempts have been made to obtain for him deserved promotion and suitable preferment as a reward for distinguished services, yet there seems to be delay and difficulty always in attaining the

desired end. He has been in the army for thirty-three years, about half of that time since his graduation in medicine, and now at the age of fifty-three, he is only a first lieutenant in the medical department. While a member of the army board for the study of infectious diseases in Cuba, and serving with Reed, Agramonte and Lazear, he submitted to the bite of an infected mosquito, had a severe attack of yellow fever, the first experimental case, which is supposed to have caused the heart trouble from which he is suffering. He has had several important assignments, and always acquitted himself creditably. He has published numerous valuable papers and observations. It is to be hoped that in his declining years and failing health the Executive will grant him due recognition.

Another Point of View.

Some activity is under way in the matter of patent medicine advertisement in the religious press. We are in receipt of some circular matter originating from Dr. F. W. Dortch, of De Ridder, La., asking aid in influencing the ministers of the State. The JOURNAL can serve this end only indirectly through calling attention to the need of the influence of the medical profession in arguing the harmful effects of the tacit endorsement of irregular medicines, advertisements of which appear in periodicals. Enough, of course, has already been done by Collier's to attract the attention of the general public, but there evidently is some truth in the saying that "One fool is born every minute," for certainly advertising would not pay unless the product found its sale.

In many fields the minister and the physician find occasion to work together, and there is none in which they can co-operate to a better purpose than in the crusade against the patent medicine evil. Perhaps the time is not yet ripe, but it is only a question of a little while when the State itself must step in to protect its citizens. The education of legislators and others preliminary to a legislative activity in this regard must be done wholesale, and if the minister is sincere in his utterances from the pulpit his influence should extend far enough to compel the sectarian press to so conduct its advertising pages as to make them clean and above reproach on this particular score.

We are particularly glad to find that one of our own profession has started the movement among the members of the religious community, and we trust that his efforts may be crowned with some degree of recognition and of success as well.

Abstracts, Extracts and Miscellany.

Department of Obstetrics and Gynecology.

In Charge of DR. P. MICHINARD and DR. C. J. MILLER, New Orleans.

POST OPERATIVE ILEUS.—The good quality of the pulse in spite of its increased frequency is the most reliable sign by which to diagnose mechanical ileus. (Baisch, *Zentralbl. für Gynökol* No. 43.) In 16 cases operated upon for ileus after laparotomy, adhesions were found to be the cause, and in 72 per cent. of the cases there were firm adhesions between the pelvic organs and bowel. The author proved experimentally that when the peritoneum is free from blood no adhesions were formed, even when large portions of the serosa are separated or destroyed by heat. Even extreme injury of the peritoneum does not lead to adhesions, and the effect of the cautery need not be feared in respect to formation of adhesions. It is the presence of blood which causes adhesions. The chief point to aim at, therefore, is perfect haemostasis. To effect an early action of the bowels two teaspoonfuls of castor oil should be given a few hours before operation. Should neither flatus nor feces be passed by the evening of the third day, and sickness with meteorism occur, feeding by mouth must be stopped, saline infusion must be resorted to, the stomach washed out and more castor oil given. If the pulse becomes more rapid and smaller, operation must be performed. If ileus follows vaginal operation seek for adhesions and free them cautiously per vaginam, or else open the abdomen. The adhesions are generally to be found on the stump, or laparotomy wound. Baisch advises that the bowel be emptied

through a fair sized trochar and the opening closed. Of sixteen cases of ileus operated upon, thirteen recovered.—*Jour. Obst. & Gynec., British Empire.*

INTERNAL PODALIC VERSION IN SHOULDER PRESENTATIONS, WITH ESPECIAL CONSIDERATION OF THE PROGNOSIS—(L. Demelin, *L. 'Obstetrique*, May, 1906.) From 153 cases of shoulder presentation the author eliminates 78 complicated with placenta previa, and various other pathological conditions which would affect the prognosis, and studies the remaining 75 from the standpoint of the prognosis of the operation. The maternal mortality was 4 per cent. In 8 cases the fetus was dead before the operation. Of the remaining 67 cases, the foetal mortality was 24 per cent. In 26 cases the membranes were intact. Here the maternal mortality was zero, but two fetuses were killed during the extraction. The conclusion drawn from the series is, that in case of intact membranes the patient should be put to bed, and all measures tending to excite uterine contractions, like internal examination, dilatation of cervix, etc., should be avoided until complete dilatation, when internal version should be made.

In 49 cases of version after the rupture of the membranes, three mothers died of rupture of the uterus. Of 22 fetuses, 8 died before intervention, and 14 as a result of extraction (34 per cent.). These results are not favorable to the practice of rapid extraction of the child with incomplete dilatation. Hence the conclusion that when the membranes are ruptured, if version is not contra-indicated, turn at once, or as soon as sufficient manual dilatation can be effected. Abstain, however, from immediate extraction, and wait for complete dilatation before extraction, or for spontaneous expulsion.—*Surg., Gyn. and Obst.*, Jan. 1907.

THE TREATMENT OF SUPPURATIVE CONDITIONS IN THE ABDOMINAL CAVITY; GENERAL AND LOCAL—Douglas (*Annals of Gyn. & Ped.*, June, 1906) discusses under this head the indications for drainage.

Drainage is said by various writers: (1) Not to drain; (2) to lessen peritoneal resistance; (3) to increase the risk of intestinal obstruction; (4) to increase the formation of adhesion; (5) to increase the danger of fecal fistulæ; (6) if bulky, to increase post operative shock; (7) to increase the danger of wound infection and subsequent hernia; (8) to lengthen the period of convalescence.

Clark, after an analysis of 1,700 cases in Kelly's Clinic, states that drainage should only be used in (a) general purulent peritonitis; (b) when there is an abscess sac walled off from the general peritoneal cavity and it is inadvisable or impossible to extirpate it; (c) in intestinal wounds when the integrity of the sutures is doubtful.

Küstner, after an analysis of 2,211 laparotomies, advised drainage only in (a) injury to intestine or bladder, operative or pre-operative, (b) pus sacs opened not during the operation, but secondarily; (c) in the presence of uncontrollable, parenchymatous hemorrhage.

Olshausen only uses drainage when there is left a pus producing passage, as in perityphilitic abscess. Zweifel operated upon 140 cases of pyosalpinx without drainage and with one death.

THE INTRAVENOUS INJECTION OF COLLARGOL IN PUERPERAL FEVER—(M. Cohn, *Revista de Chirurgie*, June, 1906.) During the last year 26 cases of severe puerperal infection were treated at the Bakarest Maternity Hospital by means of intravenous injection of collargol, and of these 25 recovered. This method of treatment was instituted only after the usual means were tried and the patients showed no improvement. The last cases received larger doses than the first, and as much as 0.25 was injected daily. Although collargol is not a specific, it may be considered a valuable adjunct in the treatment of severe septic processes in the puerperium.—*Annals of Gynec. and Ped.*

Department of General Medicine.

In Charge of DR. E. M. DUPAQUIER, New Orleans.

NOTE ON THE THERAPEUTICS AND PROPHYLAXIS OF INFLUENZA BY QUININ.—“From the time of the first invasion of influenza I have found that the best remedy was quinin,” says Sir William Broadbent. “My usual prescription was one drachm of ammoniated quinin and two drachms of liquor ammonia acetatis every hour for three hours, and then every four hours.

“In the fulminating attacks of influenza, in which the patient has become comatose, hydrobromate of quinin, given hypodermically in large doses, has completely relieved the unconsciousness.

"As a prophylactic, I early ordered two grains of quinin every morning during the prevalence of the epidemic and the results appeared to be good. Of course, patients who were taking quinin did occasionally get influenza, but I have known very many instances in which this dose has made a complete difference in the patient's liability to infection, and even in the general mode of life.

"I have, moreover, had opportunities of obtaining extraordinary evidence of its protective power. In a large public school it was ordered to be taken every morning. Some of the boys in the school were home boarders, and it was found that while the boarders at the school took the quinin in the presence of a master every morning, there were scarcely any cases of influenza among them, although the home boarders suffered nearly as much as before.

"In a large girls' school near London the same thing was ordered, and the girls and mistresses took their morning dose, but the servants were forgotten. The result was that scarcely any girl or mistress suffered, while the servants were all down with influenza."

Department of Therapeutics and Pharmacology.

In Charge of DR. J. A. STORCK and DR. J. T. HALSEY, New Orleans.

CALOMEL IN ENTERIC FEVER—C. B. Ker (*Edin. Med. Jour.*), after discussing the use of various antiseptics in typhoid fever, lauds calomel as being superior to them all, particularly when employed in connection with intestinal irrigations. He denominates his treatment "antisepsis by elimination," and has used it in 758 cases of enteric fever. The treatment consists in administering aperient doses of calomel (3 grains) every second or third day, supplemented by hot water irrigations of the colon. The diet is chiefly milk, and water drinking is encouraged. The advantages of the method are that it produces no pain and does not cause diarrhoea.

The percentage of perforations was under 2 per cent., a rather low figure; hemorrhage occurred in 8.04 per cent., which seems large, but the loss of blood in many of the instances was slight. Marked meteorism is a contra-indication to the use of calomel, but this manifestation may be caused to disappear by giving a small

irrigation, and calomel may be allowed after twenty-four hours, unless blood appears as the result of the enema. Mercuribolism was never noted. The death rate of the patients treated as above was 9.36 per cent., but in calculating these figures no deductions are made of cases dying within forty-eight hours after admission. The author concludes with the statement that the calomel treatment is not unsafe, and ulcerative accidents are not increased. He makes the claim that the treatment leaves the patient free to deal with the enteric poison and relieves him from septic absorption; the bowel is kept clean, meteorism is reduced, and diuresis is assisted.

The suggestion is made that this method, in connection with the use of a specific serum, when such is obtainable, would be the most rational to employ in enteric fever. (J. A. S.)

THE TREATMENT OF ANEURISM BY RELAXATION OF ARTERIAL TENSION.—H. Huchard (*Journal des praticiens*) reports three instances of aneurism which he has followed, two for eight years and one for four years, in two of which permanent cure has resulted from treatment calculated to reduce vascular tension below the normal. The treatment consists in keeping the patient at rest in bed and in prescribing a diet from which soups containing an excess of fat, meats, especially those cooked rare, game, fish, cheese, salted foods, tea, coffee, spirits, heavy beers, and an excess of wine are eliminated. Tobacco is also forbidden. Drugs, such as trinitrine, tetranitrol, and sodium nitrite, were administered. The author considers that the iodides have been overrated in this connection. In syphilitic aneurisms mercurial injections are dangerous on account of their liability to affect the kidneys, and as a consequence to cause increased arterial tension. The milk diet in connection with theobromin, which assists in eliminating vasoconstrictor poisons, is very helpful in reducing vascular tension. (J. A. S.)

Department of Ear, Nose and Throat.

In Charge of A. W. deRoaldes, M. D., and Gordon King, M. D.
New Orleans.

ETHYLOFORM AS A GENERAL ANESTHETIC.—Delstonche, of Brussels, reports the result of his experience in a hundred cases anesthetized with this agent, and compares its action with that of

ethyl bromide. The drug is more volatile than the bromide, and is best given with a special mask adapted by the author. Anesthesia takes place in ten to twenty seconds and lasts for two or three minutes, being more rapid and evanescent than ethyl bromide. This latter drug the author prefers for children under fourteen, while ethyloform is better for those over that age and for adults.—*Revue Hebdomadaire de Laryngologie*, Aug. 25, 1906.

A CASE OF REBELLIOUS COUGH DUE TO ECZEMA OF THE AUDITORY CANAL.—Dr. Kanellis, of Smyrna, gives an interesting description of a case of obstinate cough for which no cause could be assigned until it was discovered that the patient was also suffering with an eczema of the auditory canal. The canal when touched began to itch severely, and the cough became violent and uncontrollable.

When other measures of treatment had failed the cough was quickly cured by appropriate treatment of the ear lesion.

The writer has observed similar cases which are by no means rare, and in one instance temporary aphonia and cough could be brought on by irritation of the auditory canal. Such phenomena are usually observed in arthritic subjects.—*Revue Hebdom. de Laryngologie*, Dec. 8, 1906.

Louisiana State Medical Society Notes.

In Charge of Dr. P. L. THIBAUT, Secretary, 141 Elk Place.

NEXT MEETING: NEW ORLEANS, MAY 14, 15, 16, 1907.

OFFICERS—President, Dr. Henry Dickson Bruns, New Orleans; First Vice-President, Dr. Charles McVea, Baton Rouge; Second Vice-President, Dr. George F. Wilson, Bienville; Third Vice-President, Dr. A. J. Perkins, Lake Charles; Secretary, Dr. P. L. Thibaut, New Orleans; Treasurer, Dr. Jules Lazard, 830 Canal Street, New Orleans.

COUNCILLORS—Chairman, Dr. E. J. Graner, 2d Cong. Dist., New Orleans; Secretary, Dr. J. L. Scales, 4th Cong. Dist., Alden Bridge, La.; Dr. P. E. Archinard, 1st Cong. Dist., New Orleans; Dr. J. Wofford Sanders, 3d Cong. Dist., New Iberia, La.; Dr. S. L. White, 5th Cong. Dist., Ruston, La.; Dr. C. M. Sitman, 6th Cong. Dist., Greensburg, La.; Dr. C. A. Gardiner, 7th Cong. Dist., Sunset, La.

CHAIRMEN OF SECTIONS FOR 1907 MEETING.

GENERAL MEDICINE—Dr. J. C. Willis, Shreveport.

SANITARY SCIENCE AND QUARANTINE—Dr. J. N. Thomas, Quarantine.

MARITIME AND INLAND. SANITATION—(Sub-Section)—Dr. Quitman Kohnke, Covington.

X-RAY AND ELECTRO-THERAPEUTICS—Dr. N. F. Thiberge, New Orleans.

DISEASES OF CHILDREN—Dr. J. S. Stephens, Jr., Natchitoches.

ORAL SURGERY—Dr. L. D. Archinard, New Orleans.

MATERIA MEDICA AND THERAPEUTICS—Dr. C. J. Gremillion, Alexandria.

SURGERY—Dr. E. D. Newell, St. Joseph.

Subject: "What Class of Surgery Should the Country Doctor Do and What Class Can He Afford to Neglect."

To Open Discussion: Drs. E. Denegre Martin, of New Orleans, and T. E. Schumpert, of Shreveport.

NEUROLOGY—Dr. Roy M. Van Wart, New Orleans.

Subject: "Peripheral Nerve Injuries; Their Prognosis and Treatment."

GENITO-URINARY DISEASES—Dr. Chas. Chassaignac, New Orleans.

Subject: "Is Sexual Continence Compatible with Health?"

OTOLOGY—Dr. J. P. Leake, New Orleans.

BACTERIOLOGY—Dr. J. D. Weis, New Orleans.

DERMATOLOGY—Dr. Ralph Hopkins, New Orleans.

OBSTETRICS AND GYNECOLOGY—Dr. R. W. Faulk, Monroe.

IMPORTANT NOTICE—Chairmen of Sections are requested to select their openers of discussions and to send the names thereof to the Secretary, Dr. P. L. Thibaut, 141 Elk Place, New Orleans, La. This matter should be attended to at once, so that the information can be published in the next issue of *THE JOURNAL*. The subject of the Sections should also be selected without delay by the respective Chairmen.

TITLES OF PAPERS TO BE READ AT 1907 MEETING—"The Present Status of the Question of Uterine Carcinoma, with Especial Reference to Its Early Diagnosis and Radical Treatment," by Dr. S. M. D. Clark, of New Orleans.

IMPORTANT NOTICE —Members of this Society desiring to read papers at the coming meeting are earnestly requested to send their titles at once to this office and not wait until the last moment. The time is short and it behooves everyone to be getting ready.

PARISH SOCIETY MEETING.

THE FRANKLIN PARISH MEDICAL SOCIETY met in regular session Jan. 8, with Dr. L. M. Griffin, President, in the chair. The reading of the minutes of the preceding meeting was dispensed with.

Discussion of "Puerpural Infections" opened by Dr. Womble, and participated in by Drs. Lee, Guice, Ramage, Griffin and Robinson.

The following resolution in regard to life insurance examinations was introduced by Dr. Womble, and passed by the Society:

Resolved, by the Franklin Parish Medical Society, That the members of this Society hereafter refuse to make any examinations for old line life insurance companies for less than five (\$5.00) dollars.

The Secretary was appointed a committee of one to confer with the State Board of Medical Examiners and an attorney, with a view to prosecuting illegal practitioners.

Dr. Fred Robinson, of Winnsboro, was duly elected a member of the Society.

The election of officers resulted as follows: Dr. C. L. Guice, of Winnsboro, President; Dr. C. S. Ramage, of Winnsboro, Vice President; Dr. H. B. Womble, of Gilbert, Secretary-Treasurer.

The President appointed the following standing committees: Drs. Robinson, Griffin and Womble, scientific work; Drs. Lee, Ramage and Denson, Public Health and Hygiene; entertainment, Drs. May, O'Brien and Mecom.

Subject for discussion at next meeting: "Ergot and Quinin as Oxytoxics."

Medical News Items.

THE NEW YORK STATE COMMISSION TO INVESTIGATE THE CONDITION OF THE BLIND has undertaken, under the direction of the Legislature, the statistic inquiry into conditions leading to blindness. The profession generally in New York State has been circularized and the JOURNAL is pleased to notice the good work.

Detailed information is sought regarding congenital blindness

from the viewpoint of heredity, consanguinity, &c.; ophthalmia neonatorum with reference to the preventive measures, statistics and established remedies employed; trachoma and other infectious eye diseases with reference to statistics, early treatment, prevalence in schools, asylums, and preventive measures under medical inspection; blindness from accidents, injuries, fireworks, &c.; toxic amblyopia from toxic agents.

A number of other captions are covered in the plan of investigation, the scope of which the above would indicate. The Commission is especially anxious to derive information from all sources, and all who are interested in the matter would aid in addressing Dr. F. Parke Lewis, No. 454 Franklin Street, Buffalo, New York.

THE THERAPEUTIC GAZETTE IN ITS COMBINATION WITH *Medicine and the Medical Age*, now incorporated under the first title, has made its initial appearance under a new garb. Very little difference is noticed in the general scope of the contents, which, however, have lost none of their interest or importance by the amalgamation. The JOURNAL wishes the combination continued success.

THE LONG ISLAND MEDICAL JOURNAL makes its initial appearance with the January number under the editorial charge of Dr. Paul M. Pilcher, of Brooklyn, who is already well known to the literary and practicing profession. This Journal is under the direction of the associated physicians of Long Island, and the first number would indicate in its general high tone a useful future for the publication.

THE AMERICAN ANTI-TUBERCULOSIS LEAGUE will hold its next meeting in Atlantic City from June first to fourth, 1907, and as the meeting is planned to take place about the time of the American Medical Association annual gathering there ought to be a large attendance.

TOURO INFIRMARY OPENING.—On February 10 a general invitation was issued to physicians and others interested in the opening of the New Touro Infirmary. Considerable attention has been attracted to this institution during the past few years since the first effort to create a fund sufficiently large for the purpose of erecting adequate buildings for the needs of a growing patronage.

In both the indoor and outdoor clinic arrangements the new buildings are thoroughly modern and built after the hospital lines of similar structures in the North and East. It is of particular note that a considerable sum of money, amounting to about \$300,000.00, has been expended in making a complete building.

A revision of the system of the institution has occurred with the construction of the new buildings. A systematic schedule of government in both the domestic and medical departments has been arranged, entirely abrogating the old methods modeled after the practice here for so many years. Both the interne and visiting staff is arranged in senior and junior services and elected for a period of one year, subject to continuance.

The medical staff has quite a number of additions, and care has been taken in dividing the whole service into distinct departments, over which the chief has entire charge. These divisions are in charge of the following well-known New Orleans physicians, and the services are arranged as shown in the list here given:

Seniors—Department of Surgery, Dr. R. Matas; Department of Gynecology and Obstetrics, Dr. W. Kohlmann; Department of Medicine, Dr. J. D. Weis; Department of Skin, Dr. J. N. Roussel; Department of Eye, Ear, Nose and Throat, Drs. P. L. Reiss and M. Feingold; Department of Neurology, Dr. R. M. Van Wart; Department of Pediatrics, Dr. E. D. Fenner; Department of Orthopedics, Dr. E. S. Hatch; Department of Pathology, Dr. O. L. Pothier.

Juniors—Department of Surgery, Drs. W. S. Bickham and A. J. Mayer; in its allied branch, genito-urinary diseases, Dr. A. Nelson; Department of Gynecology and Obstetrics, Drs. J. W. Newman, Jos. Conn and M. A. Shlenker; Department of Medicine, Drs. J. T. Halsey and I. I. Lemann; in its allied branch, digestive organs, Dr. S. K. Simon; Department of Pediatrics, Dr. King Logan; Department of Radiology, Dr. B. Guthrie; Department of Orthopedics, Dr. P. A. McIlhenny.

THE ANNUAL MEETING OF THE STATE MEDICAL ASSOCIATION OF Texas for 1907 will occur at Mineral Wells May 7, 8 and 9. The following are the committees and section officers:

Committee on Public Policy and Legislation.—G. B. Foscue, Waco; I. C. Chase, Fort Worth; George R. Tabor, Austin; Marvin L. Graves, Galveston; W. B. Russ, San Antonio.

Committee on Memorial Resolutions.—J. D. Osborn, Cleburne; J. C. Loggins, Ennis; S. C. Red, Houston.

Committee on Arrangements.—J. H. McCracken, Chairman, Mineral Wells; C. B. Williams, Mineral Wells; B. R. Beeler, Mineral Wells.

Section on Surgery.—W. G. Jameson, Chairman, Palestine; C. A. Gray, Secretary, Bonham.

Section on Dermatology.—J. B. Shelmire, Chairman, Dallas; E. A. Blount, Secretary, Dallas.

Section on Pathology.—Wm. Keiller, Chairman, Galveston; G. M. Hackler, Secretary, Dallas.

Section on State Medicine and Public Hygiene.—M. M. Smith, Chairman, Austin; T. C. Whitehead, Secretary, Del Rio.

Section on Ophthalmology, Otology, Rhinology and Laryngology.—Robert E. Moss, Chairman, San Antonio; G. S. McReynolds, Secretary, Temple.

Section on Gynecology and Obstetrics.—Frank D. Thompson, Chairman, Fort Worth; F. U. Painter, Secretary, Pilot Point.

Section on Medicine and Diseases of Children.—J. W. Largent, Chairman, McKinney; J. T. O'Barr, Secretary, Ledbetter.

Section on Psychology and Medical Jurisprudence.—R. B. Sellers, Chairman, Comanche; Russell Caffery, Secretary, San Antonio.

PENNSYLVANIA RAISES THE REQUIREMENTS FOR ADMISSION TO MEDICAL SCHOOL.—Recognizing the advantages of a broader general education and the growing necessity of the prospective student having in addition special preparation for the study of medicine, the Board of Trustees of the University of Pennsylvania has decided recently to raise the requirements for admission to its medical school. These requirements include two years of general college training, and in addition a certain knowledge of biology, chemistry and physics. According to the plan which has been adopted, the standard will be raised gradually, beginning with the academic year 1908-1909 and reaching the maximum 1910-1911.

GLYCOZONE VS. LIQUOZONE.—The Drevet Manufacturing Company has obtained a decision against the Liquozone Company whereby the name "liquozone" was barred from registration in the United States Patent Office as unlawfully interfering with the

trade mark "glycozone." As it is the purpose of the Drevet Company to prosecute to the fullest extent of the law any individual or corporation infringing upon this trade mark, which has been duly registered under the new law, it would be well for all parties to take notice of this decision.

FEDERAL QUARANTINE.—The Alabama Legislature has passed a bill authorizing the Quarantine Board of Mobile Bay to transfer its properties and its jurisdiction to the United States Government, and this bill, which received the signature of Gov. Comer, is now a law.

ANNUAL SESSION OF THE LOUISIANA DENTAL SOCIETY.—During the past month this society held its annual meeting in New Orleans, largely attended by members from all parts of the State. The principal business of the morning session of the first day, after the presentation of reports by officers and several committees, was the election of two new members, Drs. F. L. Bordelon and C. G. Ducote. At the night session, at which there was a larger attendance, three new members were elected: Drs. H. H. Horsey, of Crowley, and Charles S. Tuller and A. J. Cohn, of this city.

President F. A. Blanchard, of Moreauville, was in the city, but was unable to attend the meeting on account of illness. The annual address of the President, therefore, was read by Dr. Andrew G. Friedrichs. Following this were many interesting papers by members of the society.

ACADEMY OF STOMATOLOGY OBSERVES ITS ANNIVERSARY.—The twelfth anniversary of the New Orleans Academy of Stomatology was the occasion during the past month of special festivities and a banquet. Thirty members of the Academy and their guests sat at the table and the evening proved a gala one in the history of the organization. Dr. A. L. Plough, President of the Academy, welcomed the company, but this after a standing toast was drunk to the health of the President. Dr. E. D. Friedrichs, the annual orator, made an eloquent address, and on motion of Dr. L. D. Archinard, Dr. Friedrichs was unanimously elected an honorary member of the Academy.

NEGRO DOCTORS MEET.—The Louisiana State Medical, Dental and Pharmaceutical Association, a negro organization, held its annual election of officers in February, and officers were elected to serve for the ensuing year.

MEETING OF THE RAPIDES PARISH MEDICAL ASSOCIATION.—The Association held its annual meeting during the past month and installed the following officers to serve for the following year: Dr. R. O. Simmons, President; Dr. F. V. Gremillion, First Vice-President; Dr. R. F. Hanell, Second Vice-President; Dr. G. M. G. Stafford, Secretary. After the meeting the members enjoyed a banquet.

NEW DIRECTORS FOR THE SENSES HOSPITAL.—The following gentlemen have been elected directors of the Senses Hospital: Dr. Charles Chassaignac, Dr. L. G. LeBeuf, Dr. J. B. Elliott, Jr., Dr. John Callan and Mr. A. B. Blakemore.

PERSONALS.—Dr. Henry G. Spooner, formerly editor of the *American Journal of Urology*, and now living on his estate in Florida, has been in the city for the Carnival festivities, and was welcomed by several of his colleagues.

Dr. P. H. Jones, of Litcher, La., who has gone to Baton Rouge to live, received quite an ovation from his friends and patients just before his departure. A copy of complimentary resolutions, signed by more than 200 citizens of St. James Parish, was presented to the doctor, and responded to by him with a very feeling speech.

Among the visiting doctors during the past month were Dr. R. P. Ames, of Ft. St. Philip, and Dr. T. Engelbach, of Grand Isle, La.

There have been a number of removals among the readers of the *JOURNAL*: Dr. J. H. McCaleb has moved from Torras, Pointe Coupee Parish, to Monroe, La., where he will be permanently located. Dr. J. B. McAllister has gone from Aquilla to Albany, Texas. Dr. W. F. Botts has gone to live in Mexico, Mo. Dr. M. R. McAlpin has changed his residence from Leesville to Cravens, La., and Dr. H. G. Savage from Pecan Gap to Warsaw, Mo.

MARRIED: Dr. J. T. Shaw, of Boyce, La., to Miss Catherine Thompson, on February 7, 1907.

Dr. Theodore Borroum, of Corinth, Miss., was married to Miss Carrie McWilliams on February 14.

Dr. W. T. Newman to Miss Elve Dolhonde on January 16, 1907.

THE PUBLIC HEALTH AND MARINE HOSPITAL SERVICE announce an examination for candidates for admission to the grade of assistant surgeon, to take place at No. 3 B Street, S. E., Washington, D. C., April 15, 1907, at 10 o'clock A. M.

Candidates must be between 22 and 30 years old, graduates of a reputable medical college, and must furnish testimonials as to their professional and moral character.

Examinations are physical, oral, written and clinical. In addition, candidates must certify the belief that they are free from ailments disqualifying them for service in any climate.

Successful candidates will be numbered according to the examination standing and will be commissioned in this order as vacancies occur. The salary is \$1,600.00, which is increased with promotion, and the tenure of office is permanent.

For further information address "Surgeon General Public Health and Marine Hospital Service, Washington, D. C."

Book Reviews and Notices.

All new publications sent to the JOURNAL will be appreciated and will invariably be promptly acknowledged under the heading of "Publications Received." While it will be the aim of the JOURNAL to review as many of the works received as possible, the editors will be guided by the space available and the merit of the respective publications. The acceptance of a book implies no obligation to review.

Diseases of the Heart, by GRAHAM STEELL, M. D., F. R. C. P. P. Blakiston's Son & Co., Philadelphia.

Hardly a work to be recommended to a student, certainly not in the same class with Colbeck. The chapter on Clinical Pathology is exceedingly good and brings out strongly the fact, so often overlooked by clinicians, "that in a very large number of cases of mitral incompetence there is no structural disease of the valves; they are rendered incompetent only on account of the failing to receive, in the performance of their function, the assistance from the heart muscle, that physiologically they are entitled to." The chapters on Physical Methods of Diagnosis give us nothing new, while the explanation of the influence affecting the contractility of the muscle-fibres of the heart is anything but clear or convincing. The chapter

on the pulse contains many sphygmographic tracings which are excellent and instructive.

The absence, in many cases, of any bruit or murmur over aneurismal dilatations is emphasized as it should be; for in many works on Physical Diagnosis this sign is regarded as pathognomonic, a fact controverted by numerous postmortems.

In discussing angina pectoris Dr. Steell emphasizes a point which is of importance in drawing attention to the frequency with which patient and physician are misled into regarding the eructation of gas as an evidence that the stomach, not heart, was at fault. I should say that 95% of true anginas have the symptom.

The necessity of proteids rather than carbohydrates in the diet of cardiac sufferers is ably discussed and certainly should be followed. In treatment Steell claims that the nitrites are used without any true knowledge as to their action. My experience certainly bears out his statement. His use of purgatives is a little too conservative, while the value of the Nauheim bath combined with the Scott exercises certainly deserves more extended notice.

J. B. ELLIOTT, JR.

Walter Reed and Yellow Fever, by HOWARD A. KELLY. McClure, Phillips, & Co., New York, 1906.

Dr. Kelly has gone out of his beaten path to write an entertaining and instructive biography of Dr. Walter Reed, the man to whom the South and the world owe so much on account of his yellow fever work and the practical application of the mosquito theory, as it was properly termed when he took hold of it.

Every medical man wants this book, more particularly every Southern man, for obvious reasons. Every medical student should have it for the lessons it teaches in showing Reed the man. Every layman interested in hygiene and who can appreciate the work of Reed, or who wishes to understand something of the high ideals of our profession, also needs it.

C. C.

Lectures of the Chautauqua School of Nursing, Jamestown, New York.

This is a set of 26 lectures issued by the Chautauqua School for the purpose of teaching those who can not obtain training in a regular school for nurses. In our opinion nursing can not be learned this way, and it is true that the lectures are not claimed by the originators to take the place of training. As a lot of miscellaneous information on medical and allied subjects, well boiled down and arranged, the lectures may be useful, but their value stops there.

C. C.

Genito Urinary Diseases and Syphilis, by HENRY H. MORTON, M. D. F. A. Davis Company, Philadelphia, 1906.

An excellent text-book for the advanced student and for the general practitioner who desires to keep pace with the progress which has been made in genito-urinary surgery during recent years.

This is the second edition, which has been carefully revised and is larger than the first. The illustrations are numerous and good, being mostly photo-engravings from the author's own cases.

While all important advances in genito-urinary work are noted in a concise form, the author is never dogmatic or biased, and a fair presentation is made of the whole subject.

C. C.

A Compend of Genito-Urinary Diseases and Syphilis, by CHARLES S. HIRSCH, M. O. P. Blakiston's Son & Co., Philadelphia, 1906.

To be considered together with all quiz compends, almost as necessary evils, but certainly better than the majority. It can serve a purpose, but like all such books, it has only a limited field of usefulness. C. C.

Gynecology, edited by E. C. DUDLEY, A. M., M. D. and BACHELLE, M. S., M. D. The Year Book Publishers, Chicago.

This is volume four of The Practical Medicine Series, published annually under the general editorial charge of Gustavus P. Head, M. D. The editors have compiled in this number a very instructive resume of about all of importance that has been contributed to gynecological literature during the past year. The special features of the book are the various descriptions and illustrations of the newer plastic operations and the review of the literature referring to carcinoma of the uterus. This series of books, ten in number, were published primarily for the general practitioner, but the subjects have been divided in such a manner that those interested in special subjects may purchase only the parts they desire.

The books so far issued for this year are considerably larger than for 1905, and their value has increased in proportion. MILLER.

Publications Received.

The Year-Book Publishers, Chicago, 1906.

The Practical Medicine Series. Head. Vol. X. *Skin and Venereal Diseases; Nervous and Mental Diseases*. Baum-Patrick-Healy.

Lea Bros. & Co., New York and Philadelphia, 1907.

Organic and Functional Nervous Diseases, by M. Allen Starr, M. D. 2d Ed.

The Practice of Obstetrics, edited by Reuben Peterson, M. D.

P. Blakiston's Son & Co., Philadelphia, 1906.

Text-Book of Anatomy for Nurses, by Elizabeth R. Bundy, M. D.

The Practitioners' Medical Dictionary, by George M. Gould, M. D.

MISCELLANEOUS.

Circular of Information McCormick Neurological College.

Tumors of the Cerebrum. Mills-Frazier-Spiller-DeSchweinitz-Weisenburg. Edw. Pennock, Philadelphia, 1906.

Self Propelled Vehicles, by JAMES E. HOMANS, A. M. Theo. Audel & Co., New York, 1907.

The Craig Colony for Epileptics at Sonyea in Livingston County, New York. Thirteenth Annual Report.

American International Congress on Tuberculosis in Joint Session with the Medico Legal Society of New York. Nov. 15, 1906.

Woman in Girlhood, Womanhood, Wifehood, by Dr. M. Solis-Cohen. The John C. Winston Co., Philadelphia, Chicago, Toronto, 1906.

Transactions of the American Surgical Association. Vol. XXIV. Edited by Hichard H. Harte, M. D.

Plaster of Paris and How to Use It, by Martin W. Ware, M. D. Surgery Publishing Co., New York, 1906.

Principles of Spelling Reform, by F. Sturgis Allen. The Bradley-White Co., New York, 1906.

Issue and Redemption of National Bank Guaranteed Credit Notes. Report 5629 of the 59th Congress, Second Session, House of Representatives, December 20, 1906.

The Growing Years, by Wm. Seaman Bainbridge, A. M., M. D. The H. H. Otis Book Co., Buffalo and Chautauqua, 1906.

Practical Dietetics, With Reference to Diet in Disease, by Alida F. Pattee. Fourth Edition. A. F. Pattee, Publisher, Mt. Vernon, New York. No. 52 W. 39th St., New York.

The Law and The Doctor. Vol. I. "The Physician's Civil Liability for Malpractice." Vol. II. "The Physician as Witness." The Arlington Chemical Co., Yonkers, N. Y.

Catalogue of Information No. II Illinois School of Electro Therapeutics Sixth Annual Report of the New York State Hospital for the Care of Crippled and Deformed Children.

Bulletin of the Medical Department of Tulane University of Louisiana, 1905-1906.

Reprints.

The Prevention of Venereal Diseases; (2) Urethral Dilations with Expandable Instruments; (3) The American Urological Association; (4) The Venereal Peril in Its Relation to the State, by Ferd C. Valentine and Terry M. Townsend.

Demonstration of a New Management of Pulmonary Cavities, Hemorrhages and Pleurisy by the Fixation of One Half the Chest; (2) Report on Opsonins, by Henry S. Denison, Student.

Degeneration of the Erythrocyte; (2) Iodophilia: A Pathological and Clinical Study of the Iodine Reaction in One Hundred Cases, by John C. DaCosta, Jr., M. D.

Um die Weihnachtszeit nach Florida; (2) Die Hilfsmassnahmen bei der Zerstörung von San Francisco; (3) A New Method of Incision for Re-

removal of the Breast; (4) Rectal Anastomosis of the Ureters; (5) The Surgical Importance of the Cervical Rib; (6) On the Use of the Temporal Fascia to Cover in Cranial Defects; (7) Experimental Studies on the Density of Calculi of the Urinary Tract; (8) On Extensive Separation of the Periosteum in Displaced Bone Fragments; (9) A New Method of Orchidopexy; (10) The Modern Treatment of Fractures; (11) Cholelithiasis; (12) Skiagraphic and Therapeutic Factors in Tuberculosis of the Bones and Joints, with Some Reference to the Iodiform Treatment; (13) The Influence of American Surgery on Europe, by Carl Beck, M. D.

The Treatment of Sciatica, by E. S. McKee, M. D.

Mezmar's Decapitating Ecraseur; (2) *Ether Air Anesthesia, or the Drop Method for the Administration of Ether*; (3) *The Vienna Clinics*, by Myron Metzenbaum, M. D.

Gastrogenic Diarrhea; (2) *A Clinician's Observations of Opsonic Therapy*, by Charles D. Aaron, M. D.

A Case of Rhizomelic Spondylosis; (2) *Unilateral Ascending Paralysis and Unilateral Descending Paralysis*; (3) *The Subdivision of the Representation of Cutaneous and Muscular Sensibility and of Stereognosis in the Cerebral Cortex*, by Chas. K. Mills.

A Brief Résumé of the World's Recent Cancer Research; (2) *A Clinical Lecture on Malignant and Non-Malignant Growths*; (3) *Malignant and Non Malignant Growths*, by Wm. S. Bainbridge.

The Importance of Functional Diagnosis in Renal Disease, by Dr. George Whiteside.

Mensuration of the Child In the Uterus with New Methods, by Dr. Ellice McDonald.

MORTUARY REPORT OF NEW ORLEANS.

(Computed from the Monthly Report of the Board of Health of the City of New Orleans.)

FOR JANUARY, 1907.

CAUSE.	White.	Colored.	Total.
Typhoid Fever.....	3	5	8
Intermittent Fever (Malarial Cachexia)	3	.....	3
Smallpox.....	.....	.....	.....
Measles.....	6	.....	6
Scarlet Fever.....	.....	.....	.....
Whooping Cough.....	.....	1	1
Diphtheria and Croup.....	4	.....	4
Influenza.....	5	3	8
Cholera Nostras.....	.....	.....	.....
Pyemia and Septicemia.....	1	.....	1
Tuberculosis.....	59	41	100
Cancer.....	16	4	20
Rheumatism and Gout.....	1	1	2
Diabetes.....	1	.....	1
Alcoholism.....	5	.....	5
Encephalitis and Meningitis.....	8	3	11
Locomotor Ataxia.....	1	.....	1
Congestion, Hemorrhage and Softening of Brain.....	17	9	26
Paralysis.....	2	2	4
Convulsions of Infants.....	3	2	5
Other Diseases of Infancy.....	23	5	28
Tetanus.....	4	5	9
Other Nervous Diseases.....	1	.....	1
Heart Diseases.....	47	41	88
Bronchitis.....	6	3	9
Pneumonia and Broncho-Pneumonia.....	23	22	45
Other Respiratory Diseases.....	4	3	7
Ulcer of Stomach.....	.....	.....	.....
Other Diseases of the Stomach.....	6	3	9
Diarrhea, Dysentery and Enteritis.....	18	14	32
Hernia, Intestinal Obstruction.....	1	4	5
Cirrhosis of Liver.....	4	5	9
Other Diseases of the Liver.....	2	1	3
Simple Peritonitis.....	.....	1	1
Appendicitis.....	3	1	4
Bright's Disease.....	31	8	39
Other Genito-Urinary Diseases.....	3	2	5
Puerperal Diseases.....	8	2	10
Senile Debility.....	12	12	24
Suicide.....	5	1	6
Injuries.....	19	12	31
All Other Causes.....	12	6	18
TOTAL.....	307	222	589

Still-born Children—White, 31; colored, 19; total, 50

Population of City (estimated)—White, 251,000; colored, 90,000; total, 341,000.

Death Rate per 1000 per annum for Month—White, 17.54; colored, 29.60; total, 20.73.

METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmospheric pressure 30.21
Mean temperature 63.
Total precipitation 2.14 inches.
Prevailing direction of wind, south.

New Orleans Medical and Surgical Journal.

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No. 10

Original Articles.

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. A complimentary edition of one hundred reprints of his article will be furnished each contributor should he so desire. Covers for same, or any number of reprints, may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

Louisiana State Medical Society Proceedings.

(EDITED BY PUBLICATION COMMITTEE).

P. L. Thibaut, M. D., Chairman.

The Operative Surgery of the Spine and Cord.

By Dr. WARREN STONE BICKHAM.

(Concluded from the March JOURNAL.)

TUMORS.

INTRODUCTION.

In 35,000 post mortems at the Vienna General Hospital, Schlesinger found 151 tumors of the spinal cord, meninges or vertebræ, the cord being involved, directly or indirectly, in 104 cases.

He estimated that 150 of the 400 cases then recorded were suitable for operation. Since then he has collected 56 additional cases.

Starr collected 145 cases of spinal tumor, in 75% of which he considered that the tumor could have been removed.

Spinal cord tumors, in the sense of any tumor compressing the cord, may be considered about twice as operable as brain tumors, and the results about twice as brilliant. And it is probable these results will be still better with constantly improving technic. According to Armour, of University College, London, writing in 1903, the surgical treatment of spinal cord tumors offers the most attractive field for surgical interference of all diseases of the nervous system, adding, however, and that too, in the birthplace of the modern surgery of spinal tumors, that many patients still die of sepsis following these operations as did ten years ago, and blaming the present operative technic for such unwarrantable results.

The patient has everything to gain and nothing to lose by operation, as without operation the case ends fatally or in permanent disability.

CLASSIFICATION.

Schlesinger considers that tumors originating in the vertebræ and subsequently involving the cord, are considerably more common than all meningeal and all intra-medullary tumors combined, and, that next to this, the proportion of meningeal to intra-medullary tumors is as 7 to 3 or 6 to 4.

In the arrangement of Armour (which is here slightly modified), tumors of the cord and spine are classified according to their origin, as follows:

- I. Growths arising in the vertebral column, which are divided into
 - (a) Those originating in the structures of the spine; these may be
 - (1) Primary tumors, or
 - (2) Secondary tumors.
 - (b) Those originating outside of the spine and involving the spine by direct extension.
- II. Growths arising within the spinal canal; these may be
 - (a) Extra-dural, which may arise
 - (1) From the outer surface of the membranes,
 - (2) From the tissue between the membranes and bone. or

- (3) May grow into the spinal canal through the intervertebral foramina.
- (b) Intra-dural, which may arise
 - (1) From the inner surface of the membrane.
 - (2) From the arachnoid.
 - (3) From the pia mater.
- (c) Medullary, which may arise
 - (1) From the pia mater.
 - (2) In the substance of the cord.
 - (3) In the tissue surrounding the central canal.

As loosely understood, "Tumor of the spinal cord" is generally taken to mean any form of tumor, arising in any structure, and which exercises sufficient pressure upon the cord to interfere with its functions. A more accurate understanding of the anatomical origin of these tumors, however, should be in the mind of the operator.

This classification of tumors just given, while scientifically more accurate as to detail, may be simplified for practical clinical purposes as suggested by Williamson, into:

- (1) Vertebral: Originating within the vertebræ and secondarily compressing the cord.
- (2) Extra-Dural Meningeal: Between the external surface of the dura and the spinal canal.
- (3) Intra-Dural Meningeal: Between the internal surface of the dura and the cord.
- (4) Intra-Medullary: Within the cord.

PATHOLOGY.

Williamson gives the following summary of the relative frequency of tumors at different ages:

Of the intra-medullary tumors the most frequent under ten years are tubercle; from ten to twenty years, tubercle and glioma; from twenty to forty years, same; from forty to sixty years, gumma and tubercle.

Of the extra-medullary tumors, the most frequent under ten years lipoma and sarcoma; ten to twenty years, multiple and metastatic, sarcoma and hydatid cyst; twenty to forty years, sarcoma and hydatid cyst; forty to sixty years, solitary sarcoma and psammoma.

Tubercular tumors (spinal or meningeal) are always secondary, and rarely call for special surgical interference. Syphilitic gumma is very rare.

Of the twenty-four spinal tumors successfully removed, collected by Williamson, their contributions to pathology were as follows: Hydatid cyst, 5; fibroma, 3; fibro-myxoma, 1; fibro-sarcoma, 3; fibro-myxo-sarcoma, 1; "connective-tissue" tumor (so described), 2; psammoma, 2; exostosis, 1; sarcoma, 5; lymphangioma, 1.

The most frequent tumors of the structures of the spine and cord (including tubercular and syphilitic involvements) are the following:

(1) Spinal tumors:

- Carcinoma (always secondary),
- Sarcoma (sometimes primary, often secondary),
- Exostosis,
- Osteoma,
- Enchondroma,
- Hydatid cyst,
- Syphilitic gumma.

(2) Epidural; developed from wall of spinal canal or from external surface of meninges:

- Lipoma,
- Hydatid cyst,
- Carcinoma (secondary),
- Sarcoma (secondary).

(3) Meningeal tumors:

- Tubercle,
- Sarcoma.

(4) Medullary:

- Sarcoma (primary or secondary),
- Tubercle,
- Glioma,
- Syphilitic gumma.

LOCALIZATION—ANATOMICALLY.

It is difficult to systematize the phenomena arising in connection with spinal tumors, insofar as making them serviceable as guides to localization of that portion of the cord or spine which may be

involved by the growth, but so far as such a plan is possible, Berger and Hartmann have suggested the following guides, based upon the inter-relationship of the anatomical structures involved and the resulting modifications of physiological functions. It is understood that what immediately followed has nothing to do with localization as to the *level* of the cord, of which more elsewhere, but simply as to what structure of the spine, or tract of the cord, the tumor principally involves.

(1) Tumors, apparently external, connected with the spine, and giving no nervous trouble—generally involve the posterior arches of the vertebræ.

(2) Tumors, apparently external, and accompanied by symptoms of compression—generally involve some part of the spinal column.

(3) Tumors manifesting themselves only by painful spinal phenomena—may be in the spine, in the epidural space, or of the meninges, and only press the cord or nerves.

(4) Where tumors manifest themselves by cord or nerve phenomena, one seeks to learn whether the tumor originates from bone, meninges or cord. It is useful to know whether the cord or the nerve phenomena were first observed. With all neoplasms which do not take their origin in the cord, the appearance of nerve-pressure phenomena first is the rule, cord symptoms following later.

In the case of the cord-tumors, it is important to establish approximately the position of the tumor from a careful study of its medullary symptoms;

(A) Lateral tumors of the cord give more or less the syndrome of the Brown-Sequard phenomena, paralysis with contracture, and preservation of sensibility of side where tumor exists, and anesthesia of the other side.

(B) Anterior tumors of the cord—give motor paralysis almost complete, with contracture, without notable trouble of sensibility.

(C) Posterior tumors of the cord—give trouble of sensation, tendon reflexes and incoordination.

(5) Tumors which are characterized by medullary symptoms, especially early sensory phenomena, by paralysis of sensibility to temperature bilaterally, distributed by segments, co-existing with

rapid atrophic muscular changes bilaterally, and reaction of degeneration, all point to tumor of the center of the cord.

Differential diagnosis between extra-meningeal and intra-meningeal tumors is difficult and often impossible—operations in such cases being partly exploratory.

LOCALIZATION—CLINICALLY.

The general principle of localization is based upon determining the upper limits of motor and sensory involvement upon the body in their relation to the segments of the cord in which are the nerve supplies of those parts.

The two most important general rules for localizing are the following, non-observance of which has often caused the localization of the tumor too low:

- (A) Every muscle and every cutaneous region is innervated by at least three nerves. The tumor, therefore, should always be located on a level with the highest one of the roots which is connected with innervation of the paralyzed muscle or anesthetized region.
- (B) Intra-spinal tumors tend more to involve the nerve roots on a level with their origin from the cord than on a level with their exit at the intervertebral foramina. The important bearing of which is that while the same symptomatology may accompany the lesion of a nerve whether situated at its deep origin in the cord, or at its superficial exit, yet operating, this lesion is more apt to be found at the deep origin, which is above, and often considerably above, the superficial origin.

Attention has been called by Starr to the fact that the posterior nerve roots ascend for a considerable distance on entering the spinal canal before they enter the cord, and also that they run up in the cord before ending in the posterior horns. Therefore, pain may be caused by pressure applied at a considerably higher level than the level of the pain itself. He reports one case where the limit of the pain was about eight inches below the level of the tumor. He, therefore, advises, in operating for spinal tumor, to expose the level of the cord at least four inches above the level of entrance of the spinal nerve in which the pain is recognized, and that if no

lesion be found at this level, to extend the exposure still further upward, rather than downward.

Bruns, upon the same principle, advises exposing a segment of the cord one or even two levels higher than the segment to which the sensory symptoms point out as being pressed upon.

Horsly states that the tumor may be expected four inches above the upper limit of the hyperesthetic zone.

The minute localization of the site of origin of a tumor of the spine or cord, at present, is made from the symptoms, especially the early symptoms. In general, the symptoms, irrespective of the origin of the tumor are the same—and simply indicate pressure upon the cord structures, with the involvement of its conductivity, and irritation of the nerve root.

As desirable as it would be to differentiate vertebral, extra-meningeal, intra-meningeal and medullary tumors, ability to do so with certainty is, in the present status of knowledge, at present impossible.

Early severe pain and early motor involvement are more indicative of meningeal than of intra-medullary tumor.

The most important symptoms of spinal cord tumor are—in the usual order of their development, sensory, motor, visceral, trophic, and topical.

While uncertainty may exist as to the nature of the tumor and the special cord structures involved, the site of the pressure of the tumor upon the cord is determined by the location and nature of the muscular paralysis, sensory disturbance, contractures, altered reflexes and lancinating pain.

The usual course of symptoms in tumor exercising pressure on the cord are as follows: Pain, rheumatic, or neuralgic in character, in intercostal nerves or in one limb, intermittent at first, and growing more severe; heaviness or numbness in one or both limbs—both pain and numbness generally, at first being unilateral and involving both sides prior to paresis. Subsequently, "girdle sensation" occurs, with a hyperesthetic zone just above the anesthetic region—spasticity of limbs—then loss of reflexes—loss of muscular reaction, to faradism and galvanism. Sometimes loss of temperature sensation occurs. Rigidity of the spine and local tenderness are sometimes present.

According to Starr, the chief diagnostic points in intraspinal

tumors are the development of Brown-Sequard paralysis prior to the development of paraplegia; the early occurrence of marked atrophy and reaction of degeneration in muscles; the early occurrence of trophic disturbances and of bed sores; and the development of analgesia prior to anesthesia.

GENERAL INDICATIONS FOR OPERATING.

Operate as soon as the suspicion of a tumor is reasonably confirmed.

Practically, operation is indicated in the vast majority of tumors not known to be secondary and not syphilitic.

Of tumors involving the spine itself, those of the posterior arches are, of course, much more amenable to surgical operation. Of tumors of the cord proper, while all are far less favorable for operation than those of any of the other structures, those of the anterior aspect of the cord are especially so.

One reason for unfavorable prognosis is that most spinal tumors are sarcoma or tubercle (if the latter be considered tumor)—and, further, that these tumors, malignant in themselves, are generally secondary to the malignancy elsewhere. The condition, however, is hopeless without operation. As suggested by Starr, it is quite probable that some of the cases operated upon without success, were not operated upon until secondary destruction of the cord had gone on so long that regeneration was impossible.

Where the nature of the suspected tumor, independently of its location, is not evident some advise first trying antisyphilitic treatment pressed to an extreme. Starr counsels against thus losing valuable time, advising immediate operation, if there be reasonable ground for the diagnosis of tumor at all.

If a tumor, intra-medullary or extra-medullary, is supposed to have caused irreparable degeneration of the cord—and if this could be definitely known—operation is contra-indicated, except to relieve accompanying neuralgia pains. But since there is no way of definitely knowing, operation is warrantable, and, indeed, distinctly indicated in order to find out.

INDICATIONS FOR OPERATION FROM SUPPOSED SITE OF TUMOR AND ORDER OF INVOLVEMENT.

As to indications for operation, based upon the site of tumor, and as to whether or not they be primary or secondary, supposing these

can be diagnosed with reasonable certainty prior to operation, the guides to surgical interference have heretofore usually been given as follows:

- (I) In the case of secondary tumors, if it can be determined that the spinal tumor is secondary to an epithelioma or sarcoma elsewhere, one should not operate.
- (II) In the case of primary tumors, three categories exist:
 - (A) Where the tumor developed primarily in the cord—abstain from operation.
 - (B) Where the tumor is primarily vertebral and no medullary involvement is present, two sub-divisions exist:
 - (1) Where the tumor is of the anterior portion of the vertebra or body—abstain, unless the tumor be of slow evolution.
 - (2) Where the tumor is of the posterior portion of the vertebra or arch—(a) If the tumor be large, abstain; and, (b) If the tumor be small or medium, operate.
 - (C) Where the tumor developed primarily in the spinal canal—(1) If the medullary lesion is incomplete, operate; and, (2) If the medullary lesion is complete—abstain.

It may well be asked whether the site of a tumor, especially, and even the order of involvement, whether primary or secondary, can be reasonably diagnosed in advance. Granting that they could, much aid would be given surgeons. But certain it is that conditions have been found at operations most opposite to those supposed to exist, based upon what appeared reasonably clear phenomena, and such being the case, it is plain that the diagnosis of the condition which, admittedly should be made first, is often made during the operation. Hence many of the refinements of tabulated statistics are worthless, practically.

Spinal tumors are amenable to surgical treatment in the following order: Extra-dural meningeal, intra-dural meningeal, vertebral, intra-medullary.

Intra-medullary tumors were formerly considered inoperable, but should not be so sweepingly relegated as hopeless.

Williamson, in 1902, reported a collection of 24 spinal tumors where the removal was followed by complete recovery, or by such

marked improvement as to be considered permanent. Of these 15 were extra-dural meningeal, and 9 intra-dural meningeal.

In tumors originating in the vertebræ and compressing the cord, operation is not likely to accomplish permanent good, except in the rare non-malignant growths—but it may be the means of securing temporary relief from pain caused by pressure. So may Coley's fluid also accomplish relief, in appropriate inoperable cases, by causing local necrosis.

Intra-medullary tumors are often hard to detect in the cord, even after exposure, and their removal is generally impossible without great damage to the cord. The only instance of successful removal of an intra-medullary tumor known to the writer is the case reported by Abbe.

Intra-medullary tumor of the aspect of the cord are the least amenable to operation—and the higher up the cord the tumor is situated, the worse the prognosis.

OPERATION.

The general method of exposure is by the osteoplastic resection, to be described.

After exposure the tumor may be found non-removable, and nothing remains but to close the wound; this, however, is the exception, unless the tumor be intra-medullary.

When the growth is exposed it is sometimes found impossible to tell whether the tumor originated from the cord, from the membrane or from the bone.

The tumor is best removed with a sharp spoon or curette, enucleating where possible.*

Should the tumor prove inoperable the pain, which may have been severe, may at least be relieved by the intraspinal section of the nerve roots involved in the pressure, and it is necessary to cut at least three roots, owing to the association of the sensory fibres.

It has been suggested in operating upon tumors of anterior aspect of the cord, to temporarily divide the necessary nerve roots intraspinally—displace the cord laterally and posteriorly—attack the growth—and resuture the nerves at the end of the operation.

Let the cerebro-spinal fluid escape slowly—if too freely or rapidly, surround the upper end of the cord by temporary ligature (Schæde)

*The majority of strictly intraspinal tumors are connected with the meninges and their removal, mechanically, is usually not difficult.

—or lightly pack the upper end of the canal (Pearson or Woolsey).

Suture the dura lightly with fine catgut—although its non-suture is advised by some surgeons. Temporarily drain down to the dura in any case.

In spinal tumors—resection of the vertebral arches may be indicated.

In intraspinal tumors—the osteoplastic resection, as mentioned, should be carried out in exposing the cord.

RESULTS OF OPERATION.

If improvement does not follow operation in two or three months, no great change in the direction of amelioration need ordinarily be expected, though it may occur later.

Even if the operation fail in its ultimate object, it frequently, as in malignant and tubercular involvement, relieves pain temporarily by affording the opportunity of severing the nerve roots.

SPINA BIFIDA.

This condition consists of an abnormal, congenital opening, due to error in development, situated in some part of the spinal column, generally in the median line of the posterior arches of one or more vertebræ, rarely in the bodies—through which cerebro-spinal fluid and a part or all of the structures of the cord protrude, or with which they are in contact.

Varieties:

(1) *Spina Bifida Occulta*—A vertebral cleft existing, without the protrusion of cord or membranes.

(2) *Meningocele*—The membranes alone protuding through the vertebral cleft, the cord proper remaining within the spinal canal—furnishing about 8 per cent of all cases.

(3) *Meningo-myelocele*—Both cord and membranes protrude through the cleft, the wall of the sac consisting of skin and dura matter, lined by arachnoid membranes, its cavity being continuous with the subarachnoidean space. The cord is generally in contact with the posterior wall of the sac, the nerves traversing its lateral walls to the intervertebrate foramina (though sometimes running directly through its cavity). In the lower part of the column, the nerves forming the cauda equina are usually found spread over and adherent to the wall of the sac. This, the meningo-myelocele, is

the commonest form of Spina Bifida, forming about 62 per cent. of the cases.

(4) Syringomyelocoele—The cavity of the tumor is here formed by the dilated central canal of the cord, its membranes and the integumentary coverings constituting a rare form of the disease.

(5) In the fifth form of Spina Bifida the central canal of the cord communicates with the surface of the body, no skin covering the bony defect and no barrier existing to the free escape of cerebro-spinal fluid. This is another very rare form of the lesion.

Spina Bifida is not so rare a condition as might be supposed. It is estimated by Van Buren Knott to occur once in every 1,000 births.

Rarely is the bony defect in the body of the vertebræ, but when it is the hernia protrudes anteriorly into the pelvis, abdomen, thorax or neck.

The order of frequency in which Spina Bifida occurs is lumbar, lumbo-sacral, sacral, cervical, dorsal.

Operation for Spina Bifida was considered impossible a few years ago. Bardeleben, in 1867, announced, "It (referring to operative interference) is too dangerous in comparison with its advantages and should be completely discarded." Upon the endorsement of the Clinical Society of London, the injection of Morton's fluid was for a long time the only recognized course of treatment. This, in turn, has been discarded and operation, where at all feasible, is the recognized method.

In the ordinary course of events, death usually occurs in about six months after birth in unoperative cases.

As to the question of advisability of operation, two classes of cases occur:

In the first category, the tumor, following birth, grows rapidly, the covering becomes thin, and rupture seems imminent. In these cases the general opinion is to operate—and prompt operation is, undoubtedly, the better course. Others, Broca among them, on the other hand hold that it is in just such cases that operation most frequently fails, and that it is best to do nothing. While it is true that it is in just such cases that the chances are most desperate, and hydrocephalus is most apt to follow, if parents understand and accept these conditions, operations should be done in the great majority of cases.

In the second category of cases the tumor exists, but not menacingly, and parents ask for its removal for appearance's sake only. In such cases, other conditions being favorable, one should operate.

If the child be in a bad general condition, the longer the delay, the better the chances to obtain a good immediate operative result and a satisfactory general result. The condition, rather than age, should determine the time of operation, other things being equal. The best age is between three and four years, where, as mentioned above, death is not threatened earlier. The outlook is not so good when other deformities or involvements coexist.

To summarize the indications for operation, Spina Bifida is preeminently a condition in which the patient has nothing to lose and everything to gain by operation—in spite of the fact that many cases of successful operation for Spina Bifida die subsequently of hydrocephalus.

The only operation to be seriously considered for this condition is excision, with closure of the cleft by means of flaps of the soft parts, or by one of the osteoplastic methods, as indicated, the steps and modifications of which are the following: An elliptical incision, generally in the long axis of the spine, is so planned that, beginning and ending a sufficient distance above and below the base of the tumor, its limbs are so placed upon or near the base of the tumor laterally as to enable two flaps of proper size and shape to be raised to cover the bony defect. These two flaps, consisting of all the soft parts down to the membranes, are dissected back, on each side, to a little beyond the margins of the bony cleft. Having exposed the sac proper, and having placed the head of the child low, so as to avoid loss of cerebro-spinal fluid, select some part of the sac, preferably its lateral aspect, where it is not likely to encounter cord and nerves and where the cicatrices of the median skin and lateral sac incisions will not coincide. Incise the sac carefully and enlarge the opening gradually, both to better safe-guard the nerve structures and to decrease the rapidity of outflow of cerebro-spinal fluid. Having opened the sac, one of three conditions may be found.

- (A) Where the sac contains neither cord nor nerves, the sac, if its neck be small, may either be ligated at its emergence from the spinal cleft, and excised; or if its neck be large, it may be excised just distal to the cleft and its

cut margins sutured; the former probably the better plan.

- (B) Where the sac contains unimportant nerve elements ending in its walls, one may ligate or suture as just described, as such nerves may be harmlessly sacrificed.
- (C) Where the sac contains the cord and important nerves, or even important nerves alone, running through the sac, or adherent to its walls, one should first carefully dissect out all such structures from the sac and return them to the spinal canal, after which the sac should be excised and the deep edges of the sac, including the membranes, should be sutured over these structures. The bony cleft may be closed by the already overlying structures, by myoplasty, or by osteoplasty.
- (A) Where the case is simple, the bony opening small, and the overlying skin, connective tissues and adjacent muscles and aponeuroses thick, these overlying structures may simply be brought together in the median line sutured.
- (B) In larger openings, Bayer, using the myoplastic method, after undercutting and retracting the skin, cuts out two semilunar flaps of dorsolumbar aponeuroses and muscles from the spinal furrows, one on either side of the spine, which he then displaces inward and sutures in the middle line, so twisting them that their deeper surfaces become more superficial.
- (C) Where large, extensive openings exist, some form of the osteoplastic method secures a better closure—and of these there are several:
 - I. *The osseous flap may be borrowed from the vertebral column.*
 - (a) Dolinger, retracting the muscles covering the rudimentary laminae which form the boundaries of the osseous defect, cuts through their bases, in whole or in part, freeing them as limitedly as possible from their soft parts, bends them towards the median line over the defect and sutures them there.
 - (b) Zenenko and Broca, splitting the bounding transverse processes of the two sides parallel with their faces, so as to form anterior and posterior halves, and

bending their posterior halves backward, sutures them in the median line, over the cleft.

II. *The osseous flap may be borrowed from neighboring bones other than the vertebral column:*

- (a) Chipault, by a semi-circular incision, convexity outward, detached a periosteal or osseo-periosteal flap, on each side, which he turned toward the median line and sutured.
- (b) Bobroff, made a semi-circular incision, with outward convexity along one iliac crest of the ilium. The flap is then turned backward upon the defect, its periosteal face inward, and sutured to the revived borders of the opening.
- (c) Bobroff, by another method, raises an osseo-periosteal flap from the ribs, which he turns backward to cover the cleft.
- (d) A bony flap may be raised from the scapula in the cervico-dorsal spina bifida .
Finally, osseous grafts have been taken from the scapula of dog or rabbit.

Closure of the Wound. Having provided for the closure of the bony cleft in one of the manners above mentioned, the adjacent soft parts are carefully sutured in the median line without drainage.

Dressing. A gauze and cotton dressing is applied with moderately firm pressure, in which may be included some form of mechanical dressing to protect the parts from pressure if the dorsal decubitus is to be employed—it is better, however, to fix the child face downward in a special or plaster appliance.

Generalizations: Escape of cerebro-spinal fluid during operation, if excessive, may be prevented by lightly packing the upper end of the spinal canal with gauze.

In Spina Bifida Occulta, no operation should be done, as no tumor protrudes—but if symptoms occur from mechanical pressure or otherwise, an attempt may be made to close the cleft by a myoplastic or an osteoplastic operation.

Experience has shown that even large bony defects have been effectively closed by the displacement of muscle flaps alone to cover them.

It has been suggested to spring a celluloid plate into the gap.

If the skin covering the tumor be inappropriate for covering, it should be gotten from the neighboring region by displacement.

Seek primary union—to prevent leakage of the cerebro-spinal fluid and infection. Avoid drainage.

Bayer's method is probably the most generally applicable and most frequently used of any.

It is best not to sacrifice even apparently unimportant nerves as their relative importance often cannot be determined at the operation.

In syringomyelocoele (or, synonymously, myelocystocoele), where the tumor is composed of the dilated cord itself, operation is more difficult and unsatisfactory, especially where marked paralysis has been caused by the condition. Some surgeons do not consider operation under these circumstances justifiable. The dorsal part of the cord makes up a portion of the sac-wall and may have to be injured or partially destroyed during operation. Often, however, in such cases the amount of paralysis already present is not at all increased by section of the cord.

An attempt, nevertheless, should be made to dissect the skin away from the meninges, then empty the sac, and finally cover the defect with skin, or preferably with muscle and skin—or, if feasible, by one of the osteoplastic methods.

ACUTE INFECTIVE OSTEOMYELITIS OF THE VERTEBRÆ.

The process is an acute infective osteomyelitis—and the specific organisms are the staphylococcus aureus and albus, the former generally causing a more acute and the latter a more chronic involvement.

The body of the vertebræ, as compared with the arches and transverse processes, is the seat of disease rather less frequently—though the contrary was formerly supposed.

The site of involvement in the order of frequency are lumbar, dorsal, cervical and sacral.

Whether involving the bodies; the posterior arches; transverse processes; the cord, by invading the canal; or the nerves—and whether in the acuter processes of bone invasion, or the later collections of pus—the general features, from the standpoint of the method of surgical approach, will be considered under the more frequently occurring tubercular forms of the same sites.

TUBULAR OSTEITIS OF THE SPINAL VERTEBRÆ.

The forms of tubercular infection of the spinal vertebræ may, upon the basis of the parts of the vertebræ, anatomically, which are involved, be divided into:

(A) Posterior Vertebral Tubercular Osteitis—involving the spines, lamellæ or transverse processes.

(B) Anterior Vertebral Tubercular Osteitis—Pott's disease—involving the bodies of the vertebræ and their articulations.

POSTERIOR VERTEBRAL TUBERCULAR OSTEITIS.

The posterior arches and transverse processes of the vertebræ are much less frequently the site of tuberculosis than are the bodies of the vertebræ.

When so involved the same general principle as employed in treating the more frequently invaded bodies is carried out here. The posterior structures, being much more superficially situated, the problem is a correspondingly simpler one.

The disease is exposed by the safest and most direct route, differing with the part diseased or the presence of an abscess—the general features being the opening of abscesses, removal of sequestra, and the scraping away of diseased bone.

The spines and lamellæ are exposed as in a laminectomy—the transverse processes are less accessible—but may be reached by making a somewhat longer vertical incision, so as to allow of more extensive lateral retraction of the overlying soft parts.

It may be necessary to remove laminæ in order to expose the site of the disease—or in order to remove pus which may be compressing the cord.

All pus tracts should be enlarged and curetted.

The costo-transverse articulations and even the heads of the ribs may be involved, requiring a considerable exposure.

The methods of approaching the deeper parts are more fully given under Tubercular Osteitis of the Body.

Injections, as in Pott's disease, may be first tried—iodoform and ether, iodoform and glycerin, camphorated naphthol, 5 per cent carbolic acid and other agents.

ANTERIOR VERTEBRAL TUBERCULAR OSTEITIS—POTT'S DISEASE.
INTRODUCTION.

Pott's disease, originating in the bodies, may extend to adjacent bony processes and articulation—and is most common in the dorso-lumbar, dorsal or cervical regions.

The cord may be pressed upon by tubercular deposit within the canal—pachymeningitis, with thickening of the membranes—pus formation, bony deposits, narrowing the canal, and bony angulation of the canal.

The most usual causes of pressure of the cord are tubercular deposits or pachymeningitis, rather than bony—often the greatest paralysis occurring with the least bony deformity.

INDICATIONS FOR TREATMENT.

Will differ with the stage of the disease:

(I) In the early stages:

General constitutional treatment, and
Local treatment, especially immobilization.

(II) Pott's disease with angular curvature, of which there are two classes:

- (1) Old cases of angularity, in which the least can be done.
- (2) Angularities in the act of evolution, of which there are three:

(A) Large angularities, or angularities which may be classed as old, accompanied by abscess, or occurring in cachectic subjects already involved in other tubercular lesions—immobilization.

(B) Small, recent angularity, existing without abscess and occurring in otherwise satisfactory persons—extension and immobilization. Here ligation of the spines has also been done.

(C) Deviations which accompany Sub-occipital Disease—continuous extension.

(III) Pott's Disease with Paraplegia—Compression is not caused by the vertebræ alone, if at all, but by the tubercular deposits, thickened membranes, chronic abscesses, sequestra and the like. Myelitis and neuritis are often so extensively present that nothing is accomplished by the operation. The paraple-

gia is frequently cured when the disease itself is cured. Treatment may be as in more recent angularities—by simple immobilization. If angularity co-exist, an attempt may be made to reduce it. As a last resort more active intervention may be used, such an attempt to liberate the cord and nerves compressed by the tubercular deposits, chronic abscess or by bony deformity, the outcome of which is doubtful, but the attempt is frequently better than non-action.

(IV) Pott's Disease with Chronic Abscess:

Immobilization may be used alone or in conjunction with other methods.

If the abscess accompany angular deformity, it is wiser not to try to reduce the deformity, while the pus sac exists, as rupture of the sac is apt to be followed by mixed inflection, extensive supuration and amyloid degeneration.

If the abscess be deeply placed and show no tendency to increase or give trouble, one may temporize without operation, as the abscess is often cured by the cure of the disease.

If the abscess tend to be large, or to give trouble otherwise, it may be punctured, evacuated and injected, or operated upon as described elsewhere.

If the abscess be about to rupture, it should be incised and drained, without curettage, which would likely lead to neighboring infection.

If the abscess have already ruptured and fistula be present, with or without mixed inflection, the opening should be enlarged, curetted and the pockets connected, drainage being used.

If an open abscess exist and have withstood immobilization, curettement, injection, drainage and general treatment, showing no tendency to heal—the site of lesion should be operated upon as described below.

Closed abscesses may also be operated upon radically, without being first subjected to less radical measures, according to the judgment of the individual surgeon.

The more chronic manifestations of cord pressure may be due, as mentioned by Lloyd, "To a pachymeningitis, to a tubercular deposit in the canal; to a gradual increase in the kyphosis, causing bony pressure; to an inflammatory thickening along the ligamentum subflavum; to a caseous deposit around the tubercular focus;

to rupture of an anterior abscess into the canal, or from pressure of such an abscess; or to debris from a tuberculosis of the body or other portion of the vertebræ being forced into the canal; or to sequestra."

The length of time of paralysis does not contra-indicate operations—it is rather the kind than the length of pressure that modifies the outlook.

There is a marked tendency to recovery even after long duration of the paralysis.

The condition of the cord is rather one of slowly developed pressure atrophy, than a myelitis.

Schmaus and others have shown by postmortem work that angularity of the column is the cause of pressure from the cord in only about two per cent of the cases, but that it is nearly always due to an invasion of the spinal canal by the tubercular process, a tubercular peri-pachymeningitis, or tubercular abscess in the canal, generally being the immediate cause.

The greatest relief from operation comes when the paralysis is caused by an intra-spinal abscess, or tubercular granulation tissue—at least when due to an extensive peri-pachymeningitis.

It would be ideal to remove the focus of disease before time for pus formation, although the technical difficulty and the danger are great.

There is greater mortality in operating in the cervical region than in the dorsal. Two causes of death are peculiar to this region—wounding vertebral arteries and phrenic nerves.

The suppositions of the past, of recovery following forcible straightening followed by prolonged extension, has not been verified in late years.

Reinert reports a mortality of 60 per cent. from the Tuebingen Clinic, of 23 out of 33 cases treated by extension alone, with 54 per cent of recoveries and 26 per cent improved of the ten treated by laminectomy.

In the Leipsic Clinic, from 1882 to 1889, 82 per cent. of those treated by extension died.

OPERATIONS.

Operations are Indicated—Where constitutional and mechanical treatment have failed—where bony pressure from dislocation, se-

questra or angularity is present—where pressure myelitis is threatened or peri-pachymeningitis is present.

Operations are contra-indicated—during active tuberculosis—where other complicating tubercular lesions exist, and where mechanical treatment has not been applied.

The site of disease is exposed by one of the methods already described for approaching disease of the posterior arches, or by one of those about to be given for reaching disease of the more anterior aspect of the spine.

The Puncture of Cold Abscesses—The skin should be punctured obliquely, so that the superficial and deep wounds are not in line. After evacuation the injection of one of the solutions already mentioned may be carried out.

The Incision of Cold Abscesses—This varies with the region and prominence of the abscess.

(A) Lumbar abscess, tending to descend, should be incised in the inguinal region, in the position as for ligation of the iliac artery, or extra-peritoneally in the iliac fossa or pelvis, as indicated.

(B) Lumbar-Dorsal—These should be incised either in the iliac fossa, or along the spine in the lumbar region, as in Treves' operation.

(C) Dorsal Abscess—Is best reached by the operation of Costo-Transversectomy, as described below.

(D) Cervical Abscess—Is best opened by an incision posterior to the sterno-mastoid. The skin, connective tissue and sterno-mastoid are drawn forward—the cervical plexus is guarded—the transverse process is sought and followed down posteriorly to the sheath of the vessel—until the bodies are met—where the abscess is encountered.

Method of Approaching the Vertebrae—

The exposure of the site and treatment of the lesion are here given for the different regions:

(I) In the Lumbar Region:

The Technic of Treves is the most satisfactory, the details of which are given below:

(A) Description:

The abscess is opened through an incision in the loin—the pus-sac irrigated—all caseous material curetted out

—dead bones scraped away and the sac and the wound saturated without drainage.

(B) Preparation and position:

As for osteoplastic resection of the spine.

(C) Landmarks—Last rib; crest of ilium; outer border of erector spinæ muscle (generally from 2 1-2 to 3 inches from spinous processes of lumbar vertebræ).

(D) Incision—Vertical, 2-3 inches long, with its center midway between last rib and iliac crest, passing parallel with outer border of erector spinæ.

(E) Operation: (1) Having incised skin and superficial fascia, the superficial layer of lumbar fascia (which is the posterior aponeurosis of the erector spinæ)—the lower part tendinous, the upper part giving origin to fibres of the latissimus dorsi.

(2) Divide this superficial layer of lumbar fascia, the length of the incision and expose the erector spinæ muscle, with its fibres running vertically.

(3) Recognize the outer border of erector spinæ and retract towards spine, thus exposing the middle layer of the fascia lumborum (which is the anterior aponeurosis of the erector spinæ muscle), its glistening fibres tending transversely. The erector spinæ is, at this site, now adherent to its aponeurosis anteriorly and posteriorly.

(4) Feel for the transverse processes of the lumbar vertebræ through this aponeurosis, the third usually being the most prominent. Draw the erector spinæ well towards the middle line and divide its anterior aponeurosis vertically, near to the transverse processes, thus exposing the quadratus lumborum muscle with its fibres and tendon bundles running obliquely, outward and downward.

(6) Carefully incise the quadratus lumborum near the transverse processes and enlarge to the full extent of the wound, guarding the abdominal branches of lumbar arteries. The psoas muscle (with its fibres running outward and downward) is thus exposed, overlapping the inner edge of the quadratus lumborum and running about parallel with its posterior fibres. The anterior lamella of the lumbar fascia occupies the interval between these two muscles.

- (7) Having divided some of the fibres of the psoas close to a transverse process, pass a finger underneath the muscle and cautiously advance along the transverse processes until in contact with the anterior aspect of the vertebral bodies, enlarging the incision in the psoas as far as necessary.
- (8) The abscess cavity is encountered in the passage of the finger around the body of the vertebra and is incised. A finger is then introduced into the abscess cavity and the anterior aspect of the vertebral column is carefully examined where disease of the lumbar or dorso-lumbar regions is suspected, care being taken to make provision for the escape of pus directly outward, the pus-sac itself and the lips of the sac after incision being drawn well into the wound. Free irrigation with normal salt or antiseptic fluid, of the emptied pus-sac is carried out by means of a tube conducted to its bottom, the emptying of the sac being made more thorough by an assistant's compression of the abdomen from in front and by change in the position of the patient, thus alternately filling and emptying the sac.
- (9) Following the irrigation of the abscess cavity, a finger is introduced into the sac and as much of its lining membrane as possible is removed. Diverticula are opened up and caseous masses are thus removed by the finger nail, or by a semi-sharpened spoon used with care, especially upon the thinner anterior wall of the cavity, or a flushing gouge may be used. The sac wall should finally be scrubbed with gauze carried in upon a sponge-holder. The cavity is then once more flushed out to free it of the debris of these last manœuvres, and once more wiped out so as to be left dry.
- (10) The lips of the incisions are now brought together by buried chromic gut suture, no drainage being used. The cut edges of muscles and aponeuroses are also sutured with buried chromic gut, and the skin and fascia with silkworm gut.
- (F) After treatment: As these abscesses are nearly always of tubercular origin, an indefinite recumbent posture

should be observed subsequently to operation, for usually a period of about six months, in either bed or spinal carriage. The abscess may refill with purely tubercular products and require to be again treated in the same way as before. On the other hand, the originally tubercular involvement may become the site of a mixed infection and require open treatment, an unfortunate sequence to be especially guarded against.

- (G) Comment: (1) The abscess may be approached almost equally well from an incision on either side of the spine, though somewhat more conveniently from the right side, while the peritoneum is somewhat less exposed on the left.
- (2) The difficulty of the operation is much increased by thickness of the patient's back. The length of the incision may need to be much increased or a transverse cut added to it.
- (3) Great care is necessary to avoid wounding the lumbar arteries, the abdominal branches of which generally run behind the quadratus lumborum, except that from the first (and sometimes those of one or two others), which run in front. Avoid them and the trunks from which they arise by keeping close to the transverse processes, for which reason the spine is more safely reached following along a transverse process.
- (4) While special care should be taken to avoid doing so, there should not be much danger of wounding the peritoneum, or even opening up the subperitoneal connective tissue, both risks being less by incising close to the transverse processes.
- (5) If carious and necrosed bone should be encountered, such destroyed bone should be curetted away, or removed as sequestra with properly shaped instruments, and the debris irrigated.
- (6) If much angular deformity of the spine exist, the last rib and iliac crest may be so near each other, or actually overlap, as to make the operation very difficult or impossible, though, in such extreme cases, operation is generally contra-indicated.

- (7) Iodoform emulsion thrown into the sac, and the excess squeezed out, after rubbing its walls, is sometimes used before suturing.

(II) In the dorsal region.

- (A) The operation of Costo-transversectomy best exposes the vertebræ in this region and is performed in the following manner:

A vertical incision, 8 to 10 c. m. in length, is made about 1 c. m. from the median line, its center being opposite the center of involvement. A second incision is made from the first (beginning at the centre of involvement) and is carried over the rib to be partially excised. The incisions are carried through skin, fasciæ and muscles. The two flaps made by these incisions are turned aside. The muscles and aponeuroses are levered from the spinal groove (made by the transverse processes and laminae, and corresponding with the vertical incision), and from the transverse processes and ribs, (corresponding with the oblique incision). The transverse process is excised at its base with Gigli saw, or bonepliers and torn away. The rib is exposed subperiosteally most carefully with curved periosteal elevator, and is then resected about 6 c. m. from its extremity and removed—the head remaining attached to the vertebræ, if its removal be unnecessary or difficult, thus giving access to the vertebræ for curettage and drainage.

(B) Lambotti's operation is an osteoplastic method and is performed as follows:

- (1) Elevation of osseo-muscular-cutaneous flap; the patient lies upon his left side; a vertical incision is made on the right, opposite the angles of the ribs, and two horizontal incisions are made from the ends of this, extending towards the spine, making a rectangular flap. The flap is then raised, the spines are cut at their bases, and the detachment of the flap is continued as far as the left transverse processes. A flap is thus raised consisting of skin, fascia, aponeuroses, muscle, spines, and periosteum of the laminae. The bottom of the wound is formed by laminae and the right ribs and transverse processes.
- (2) Laminectomy: Resect the laminae with a Doyen saw, and thus one reaches the transverse process.

- (3) **Resection of Extremities of Right Ribs:** This is done subperiosteally, guarding the pleura and cutting them 4 c. m. from the spine and removing them away from their articulation by torsion. According to the extent of the caries, one resects from one to four ribs. The removal of two ribs gives quite a large space, in which the pleura is pushed back and the lateral aspect of the vertebræ reached.
- (4) **Resection of the Vertebral Bodies:** In order to expose the intraspinal aspect of the vertebral bodies, two or three nerves on the right are temporarily resected, which easily exposes the meningo-medullary furrow, upon the retraction of the cord. The vertebral bodies are thus exposed—and may be attached with gouge or curette without danger to the mediastinal organs.
- (5) **Closure of the Wound:** The cord is replaced, the cut nerves are resutured with catgut, and the composite flap is replaced and sutured, temporary drainage being used or not according to indication.

(III) **In the Cervical Region:**

The operation is here performed as for cold abscess of that region, which has been just described. Incision is carried along the posterior border of the sterno-mastoid, opening its sheath. The muscle is retracted and anteriorly. Opening up the space behind the sterno-mastoid, one works toward the transverse processes, as rallying points, and then works further inward upon the vertebral bodies, behind the prevertebral muscles and, therefore, behind the sympathetic.

The general method of treating the seat of disease is by curettage, removal of sequestra and the ablation of fungosities—followed or not by drainage.

The drainage is either Prevertebral-Trans-somatic (that is, through the bodies of the vertebræ, or Pre-medullary) in those cases in which the bodies have been destroyed).

In all cases in which the spinal column may have been weakened by the combined disease and operation, some form of metallic or plaster brace should reinforce the dressing.

GENERALIZATIONS OF TREATMENT.

Where bony angularity compresses the cord in front, as is usually the case, if retraction laterally of the cord does not expose the site of pressure, temporarily resect the necessary nerves and resuture them at the end of the operation.

The angularity of bone may be erased after retracting the cord.

Do not open the dura in operating for Pott's disease, if avoidable, as the tubercular infection may be spread to an otherwise uninvolved structure.

If the cord be pressed upon by scar or granulation tissue, or tubercular or carious masses, these are to be scraped or cut away until the cord is made comparatively smooth and pulsation in it is detected, or at least until it is evident that the constriction has been removed. To accomplish this, the cord is displaced to first one side and then the other by a blunt hook.

While opening the dura is to be avoided, as mentioned above, if cause of constriction cannot be otherwise located and appears to be intra-dural, it is best to open the membranes rather than close the wound in doubt.

Especially in angulation of the spine, or adhesions between dura and bone, the close proximity of the cord to the laminae is to be expected in opening the canal.

The extra-dural plexus is generally obliterated in Pott's disease—hence hemorrhage is less apt to occur from this source.

All drainage is to be avoided in tubercular disease if at all possible, as mixed infection is so apt to occur before the long course of the tubercular trouble is at an end, and it is for this reason that the dissection out of abscess and diseased bones and the closure of the wound (or even the closure of a curetted abscess sac) are so desirable.

In operating by the costo-transversectomy method it would be better, unless the lesion were not accessible from this side, to go in on the left, as it would probably be easier to recognize the aorta from the abscess than the vena-cava from the abscess.

In closing off the neck of a chronic abscess sac the sutures should be placed deeply just within the neck.

The osteoplastic method of resection is pre-eminently to be used in exposing the cord in Pott's disease, as it does not, like laminectomy,

tomy, remove any portion of the already weakened spinal column.

The spinous processes have been drilled and wired, as well as the laminae and transverse processes.

One may often learn much of the nature of the deformity by means of the X-ray plates.

DISCUSSION.

DR. MATAS: I am confident that I am voicing the sentiments of the Association in extending to Dr. Bickham the very sincere thanks of this meeting for his thorough, clear and able treatment of a large and difficult subject, and for his equally satisfactory and interesting demonstration of the most advanced technic of osteoplastic resection of the spine. It is a source of gratification to us as his old friends and associates to have him with us on this occasion and to note how profitably he has utilized his opportunities in the course of his long absence. This admirable paper only confirms the excellent reputation he enjoyed as a superior worker and teacher at the time of his departure from this city.

He has presented five leading propositions each of which would justify a longer commentary than could be afforded by the time limit of this discussion. Of these, however, I will only venture to emphasize the need of a greater cultivation of neurology by the general surgeon who is too often dependent upon the neurologist for guidances in his operations; while it must be recognized that a highly specialized knowledge of the physio-pathology of the nervous system is difficult and practically impossible for the general surgeon whose attention is subdivided by the constant expansion of knowledge in other departments of surgery, and while there is always a place for the highly differentiated neurologic surgeon such as Horsley, Macewen, Thornburn in England, Chipault in France, Krause, Kocher and Bergman in Germany, Parlavecchio in Italy, Keen, Cushing, Hartley, Frazier and others in this country, it is nevertheless true that a highly specialized knowledge in neurology is not required to properly diagnosticate and relieve by operative treatment the vast majority of the more frequent traumatic lesions of the brain and spinal cord. While the collaboration of the neurologic expert is always valuable and profitable in obscure cases, the surgeon should be sufficiently informed to exercise his own judgment in recognizing indications and opportunities for surgical intervention.

In referring to the need of early exploration in spinal injuries there is one feature of this class of injuries which is usually not sufficiently insisted upon and must not be overlooked, and that is the absolute helplessness and dependency of this class of patients upon their surroundings. These patients are usually paralyzed, have no control of the urine and feces, and in consequence of decubitus ulcers and sloughing bed sores, are constantly exposed to the most severe types of septic infection. The operations required to expose the lesions are usually not difficult or inherently dangerous; it is the sequelæ and post operative complications which are most perilous. Success in this department of surgery depends greatly, if not essentially, upon careful, devoted and intelligent nursing. The surgeon's work is comparatively easy, but that of the nurse is hard and most trying. Not only must these patients be constantly watched and moved about in order to avoid septic complications in the wound, but the necessary appliances, viz., water mattresses and patent lifts must be attached to the bed by which the patient can be lifted and changed at frequent intervals with the least disturbance and the greatest economy of the strength of the attendants.

The lack of these necessary adjuncts to the proper care of the patient has deterred me many times from attempting interventions which were no doubt indicated. But I have felt that without skilled nursing and the facilities for the after care of these unfortunate patients, that an operation was not only unjustifiable, but tantamount to a homicide. When the proper conditions for the after care will be secured then I am confident exploratory laminectomies will become more frequent and the number of successful operations will no doubt be greatly increased in our local practice, which, owing to the drawbacks referred to have been relatively few in our institutional work up to the present time.

DR. PARHAM: I cannot refrain from expressing my pleasure at the very thorough review of this subject which Dr. Bickham has given us. I must say that I, myself, feel very remiss in this matter of spinal surgery. I have had some cases of resection of the spinal canal and they have almost always been disastrous. I opened some for the purpose of relieving the pressure. I do not believe he referred to this point in the paper which he has read. Good may sometimes be accomplished by removing the posterior

wall to allow the cord to be relieved of pressure. I have thought sometimes that I have accomplished something temporarily. I am satisfied that the doctor is correct in insisting upon earlier and more intelligent operative procedure in these cases, especially the traumatic cases. I believe in such cases, if operated early before degenerative changes have had time to supervene, that much may be accomplished in many cases. Considering them hopeless we oftentimes fail to operate in time to do any good.

I do not believe, Mr. Chairman, that it is proper at this time to attempt to go into anything like adequate discussion of such a vast field of surgery. I repeat that I feel personally much indebted to the doctor for the trouble which he has taken in laying open before us in such a judicious manner this important field of surgery, so little cultivated up to the present time.

DR. GESSNER: A difficult point is making out the extent of the lesion. Very often we have waited and lost a great deal of valuable time, thinking the lesion was slight. Dr. Bickham has emphasized the fact that in cranial work we interfere when there is indication of trouble; we should not hang back in spinal work until the patient is past hope before we try to do something for him. The poor nursing in the male wards of the Charity Hospital in the past has been such as to discourage such work. I am especially interested in the technic of the method which he has shown. Formerly I was inclined to think it a cumbersome method of getting at the spinal canal, but since assisting the Doctor in doing the operation on the cadaver it seems to be a very satisfactory method. The ease with which he did it has fully converted me.

DR. P. E. ARCHINARD: Looking at it from a standpoint of neurology I must say that the point raised by Dr. Bickham is well made. The surgeons and neurologists ought to work together as a rule. We neurologists have a fully developed case when we get it which gives us an advantage over the surgeon in the matter of diagnosis. In the charity hospital the patients are transferred to us. Usually these are old cases which are probably past the stage where operative interference would be of any value. Many times the conditions are such that we are led to believe that operative interference might have been of great assistance.

DR. FENNER: This paper includes practically the entire sur-

gery of the spinal canal and of course to discuss all of it would occupy the entire time of this session for the remainder of this meeting. The Doctor has practically confined himself to a discussion of the surgery of traumatism of the spine, and to giving an explanation of a very admirable method of getting at the cord. In his explanation, however, he names conditions which he goes into in the paper, such as surgery of Pott's Disease, etc. All of us must have been impressed by the lucidity of that portion of the paper which we have been privileged to hear. I feel that we will all be quick to take advantage of the opportunity to read those portions which he did not read. The subjects which he brought up were so thoroughly discussed by him that I feel that there is nothing more to be said.

DR. VAN WART: I listened with a great deal of interest to the paper which has been read. As to the possibility of resection I think there is some question. We have no cases directly proving this, although we do have some cases which seem to show the possibility, although they later broke down. Many of these have shown the presence of uninjured fibres. I have myself seen cases. In each one of these cases I was able to demonstrate the presence of fibres that were not injured. While I do not wish to be placed on record as stating that the resection was not possible, yet the evidence at the present time is greatly against it. As to the extent of the fibres present and injured or uninjured it is impossible to get a correct idea without the microscope is used, which renders it very important that these examinations be made. I might say that at the present time I would not like to express an opinion as to there being a transverse lesion of the cord. This point was brought to my attention last winter when there was a case of apparent symptoms of transverse lesions of the cord. It turned out to be tuberculosis.

DR. BLOOM: This paper is certainly a didactic treat. It is very appropriate at this time, and is presented by a man thoroughly familiar with his subject. I also wish to emphasize the need of care of the patients and also the provisions for that care. It is essential that we appreciate the need for after treatments. It is also well to remember that spinal surgery should not be undertaken without mature consideration and discussion with others acquainted with the conditions that might contribute to the local

symptoms evident in the case. We frequently find local symptoms which disappear in time, which should be diagnosed before we do the operation. What is said with regard to the high mortality speaks for a more just consideration before doing the operation. I remember a case of spinal gunshot injury in which Dr. Bickham removed the bullet. The pressure symptoms disappeared. The entire course of the patient was very favorable.

Referring to what he says regarding cross-sections of the cord and union by suture, I want to say that it seems very difficult to bring this about. In the matter of joining the sections I have been practically unsuccessful. It shows though what is possible, even though we ourselves are defective.

DR. PERKINS: This paper is bound to have a good effect. The State Society will certainly see results in the next year or two. There is one point I wish to emphasize. Any man who expects to do any sort of surgery on the spine is in duty bound to prepare himself by work on cadavers beforehand. He has no right to subject the patient to the dangers of the operation unless he has had experience on the cadaver first. If the dead can stand it, then he can try it on the living. It looks very simple when we see Doctor Bickham do it, but in order that we may get the results we must practice on the dead body.

DR. BICKHAM (in closing): As considerable time has been consumed by the paper just read, I only wish to express my appreciation of the kindly sentiments which I have heard here this afternoon.

Menorrhagia and the Microscope.

By DR. PAUL MICHINARD.

The purpose of this paper is to call attention to errors in diagnosis made, at times, by the microscope in the examination of specimens from supposed cases of cancer of the uterus, causing menorrhagia, and to the necessity of closer clinical study of such cases. I wish here to say that the errors are not due to the microscopist, but chiefly to the character of the specimen sent to that individual. No matter how skillful that person might be, error is likely to occur if an imperfect specimen is sent. I know that

the microscope has, under such circumstances, been the cause of hysterectomy for the cure of cancer when such a disease did not exist. On the other hand, radical treatment has been deferred too long because the microscope reported as inflammatory a condition that later proved to be cancerous. Particularly does this latter remark apply to the early stage of cancer of the body of the uterus, where scrapings only are examined.

In speaking on this subject, Cornil, in 1888, said, "although histological diagnosis is easy when we have the whole uterus to examine, it is otherwise when we can secure only small fragments of the mucous membrane. The simple glandular hypertrophy of metritis may then be difficult to distinguish from carcinoma, especially when the mucous membrane of the glands cannot be examined in the deeper parts."

And still many book writers advise their readers when in doubt to send to the microscope scrapings obtained with the curette. One of my friends, a prominent pathologist, once told me that although his report on some scrapings sent to him by me that the disease was apparently cancer, to not be hasty in performing a hysterectomy, as scrapings were not always reliable specimens. I accepted his advice, and although now nearly two years have elapsed, there has not been any indication of that disease shown.

Several years ago, placing confidence in the ability of the microscope to make a diagnosis from scrapings, I performed a hysterectomy on a case that proved to be, when the entire organ was examined, simply hypertrophic endometritis. And the saddest outcome was that the unfortunate woman died 48 hours after the operation. Autopsy showed contracted kidneys, a condition associated as it is with increased blood pressure is sufficient to cause a thickening of the endometrium and menorrhagia. I know as healthy to-day a fair number of uteri that would have been sacrificed at the altar of the microscope had I accepted its opinion only.

What has been said of the body of the uterus is true as to its cervix. Imperfect specimens from this structure will frequently lead to error. The small wedge-shape piece that books tell us to examine are insufficient. That piece must include some normal tissue. An exception may be made in adeno-carcinoma. But I know it to be true in squamous-epithelioma, particularly in the early stages. Several years ago a specimen of "cauliflower

growth" from a cervical cancer in the third stage was sent to the microscope. Unfortunately there was not included any of the cervical tissue. Report received was that the disease was inflammatory. The patient on reading the report refused operation. Death occurred in five months, with involvement of broad ligament lymphatics and of the bladder.

Let us take a *clinical* view of menorrhagia occurring from some trouble in the endometrium of the body, and consider first that happening at the dangerous period of a woman's life—the **menopause**.

While I believe it is our duty to look seriously at any unusual bleedings, no matter how slight, we should not hastily assume that the cause is cancer, but should make a very careful clinical examination before trusting too implicitly to the findings of the microscope from scrapings. Many women at this time of life suffer with menorrhagia who are not afflicted with cancer.

Currier, in his work on "The Menopause," says: "It is probable that there is in these menopause-uterine hemorrhages the element of vasomotor paralysis which occurs in other parts of the body, and that the uterine capillaries and their supporting connective tissue have less resisting power on account of atrophy and fatty degeneration processes which are going on than they have had in previous years." In the number of cases of this kind that I have seen the uterus was always small, and if any thickening of the endometrium existed there was very slight enlargement of the organ. But where cancer in its first or second stage was present the enlargement was quite noticeable. When the third, or sloughing stage, has arrived, the nature of the disease is self-evident. I have seen very few cases of cancer of the body mucous membrane.

Small sub-mucous or intra-mural fibroids rarely cause trouble at the menopause. When they do, as a rule it means the existence of some degenerative changes. Then radical treatment is demanded. Where the clinician is in doubt a full cervical dilatation and thorough digital examination will render a diagnosis comparatively easy.

Where the bleeding is preceded for some time by a clear leucorrhea, recurs after a curettage and the uterus is slightly enlarged, the disease is most probably cancerous. Cancer of the body is usually accompanied by pelvic pains, particularly at night, even in the early stages—due apparently to a uterine neuritis.

At earlier periods of life menorrhagia occurs from hyperplastic endometritis, especially in multiparæ with retroversion. In quite a number of cases I have curetted away large masses of this thickened endometrium that recovered completely, although in some the microscope considered cancer to exist. In a few of these curettage had to be repeated once or twice during a period of two or three months. At these repeated curetings no excess of tissue was removed. But should such early recurrence of bleeding be associated with an equally early recurrence of the excessive glandular hyperplastic endometritis and with leucorrhea, the disease is cancerous. Therefore, when there is doubt in the mind of the clinician as to the nature of the trouble, it would be well to curette once or twice and carefully watch the patient before having recourse to hysterectomy.

We now come to menorrhagia due supposedly to cancer of the cervix. In its third stage, with its "cauliflower mass" presenting, cancer of the cervix is easily recognized by the clinician. But such is evidently not so when the disease is in its first or second stage. And here again, as was said before, the microscope strikes a stumbling block. Pozzi, in his magnificent work on gynecology, says that where there is a serious doubt as to whether the disease is or is not cancer, the chances are that it is not cancer. Clinically in this form of cancer, in its first stage and in hyperplastic cervicitis, there are menorrhagia, hardening and thickening of the cervix, with nodules consist of retained contents of cervical glands whose contents can be determined by puncture, when there will exude a pearly colored, thickish fluid. Such will not obtain if the nodule is cancerous. In cancer digital examination and coitus will cause bleeding. Not so with benign hyperplasia. Laceration of the cervix, with great hyperplasia and eversion is at times mistaken for squamous epithelioma at its second stage. Microscopical examination of a simple wedge-shaped piece of tissue, not including normal tissue, will here most probably lead to error.

Such a case should temporarily be treated as benign, an extensive trachelorrhaphy performed and all this removed tissue sent to the microscope. If the patients be near the menopause, even though the report be favorable, I have been in the habit of examining them every 6 or 8 weeks for about 6 months or a year.

One should remember that where rawness of the cervical tissue

is due to eversion of an eroded non-cancerous mucous membrane it will not crumble or bleed profusely on pressure from the finger, which would occur if it were cancer.

Where menorrhagia is co-existent with excessive hyperplasia, with only slight laceration or without laceration, we have a condition that usually resists all conservative treatment, and if left alone may soon display a malignant nature. Under these circumstances I perform a supra-vaginal amputation of the cervix, and send the entire specimen to the microscope. No matter what the report might be, I believe everything favorable to the patient will have been done. I firmly believe that in the first or second stage of cancer of the cervix a supra-vaginal amputation is as beneficial—minus its dangers—as might be hysterectomy.

In concluding, I beg to urge that we pay more attention to the clinical features of our cases of menorrhagia, watch them more closely, and be less prone to be, as I fear we are gradually getting to be, too dependent on the microscope for our diagnosis.

Cyst of Round Ligament Simulating Inguinal Hernia.

By DR. E. T. NEWELL.

The case that I am about to report to this society is one of comparative rarity. Von Bergman's Surgery mentions it as a possibility in making a diagnosis of inguinal hernia. It was just in this manner that I came upon it, as follows:

G. K., colored female, age 18 years, came to me with a small tumor in right inguinal region. Tumor was about the size of a thumb, directly over the external ring and extending slightly into the labia majorum—partially movable but irreducible. Patient said she was ruptured and had worn a truss for a year. At first the tumor was small and went away when the truss was applied. For the past month the truss produced pain when worn, so she had removed it.

A careful examination revealed a tumor that felt like a distended knuckle of small bowel, but rather more like omentum. No pain was elicited except by free manipulation or on standing. Through bowel movement daily.

There being no inflammatory signs, and after eliminating ovaries and bladder as possible causes, I decided to operate, as I thought, for omental hernia with hypertrophy, or hernia of small bowel with adherent sac. I was of the opinion that possibly an ill-fitting truss had inflamed the sac and produced adhesion.

Patient was duly prepared for operation the next evening and operated the following morning.

After getting down to the superficial rings and remaining there for some fifteen or more minutes trying to free the hernia of its sac walls, that seemed very numerous and even more difficult of dissection, I found, to my surprise, the trouble was a cyst of the round ligament. An incision into it admitting the little finger revealed its depth. It extended up the canal nearly to the deep opening. The sac was dissected out in its entirety and sutures applied in two layers. The deep sutures anchored the stump.

Primary union was obtained by using in the course of preparation of patient only McClintock soap, followed by sulphur starch to remove the hair and produce asepsis. Just prior to the operation the line of incision was mopped with alcohol.

Patient made an uneventful recovery. She was operated on January 22, 1906, and left Sanitarium, February 1, 1906. Was seen by me first of May, cured.

The following references, going back to 1900, will give you some idea of the infrequency of round ligament neoplasms.

In 1905. The *Journal of the American Medical Association* does not contain a report of a single case.

In 1904. There were reported one fibro-myoma, one myoma and one epithelioma.

In 1903. Two adeno-myomas and two fibro-myomas.

A. Brothers report a case of cyst of round ligament, as do H. M. Jones and S. Spenettii.

In 1902. No cases.

In 1901. There were two cases of fibro-myoma and myoma.

In 1900. One case, myoma.

DR. L. PERRILLIAT's paper, entitled "*The Treatment of Reducible Retrodeviations of the Uterus*," was read by title and referred

to the Committee on Publication. (*Manuscript not furnished to Publication Committee.*)

DR. C. JEFF MILLER'S paper, entitled "*Some Advantages of the Vaginal Route in Pelvic Surgery*," was read by title and referred to the Committee on Publication. (*Manuscript not furnished to Publication Committee.*)

Constipation Produced by Lacerations of the Posterior Vaginal Wall: Importance of their Diagnosis and Repair.

By DR. E. DENEGRÉ MARTIN.

Lacerations of the vagina are so common, the subject so familiar to the general practitioner, and the methods of repair so well understood by the surgeon, that anything written on this subject would seem superfluous, and I might begin by offering an apology were it not that because of this very fact the condition is too often overlooked or neglected, possibly because it is not so serious as to involve life, and therefore its importance is not considered. In many instances even extensive tears give little discomfort, and many are prone to believe that all cases are alike and an operation is indicated only when there exists marked rectocele, vesicocele or prolapse. It is not my purpose here to enter into a lengthy discussion of lacerations of the vaginal walls, but to call your attention more especially to a result from trauma, which is too frequently unobserved, and which is so often a serious inconvenience to the patient. Rectocele produced by lacerations of the posterior vaginal wall are not always recognized by visual examination. The skin which has withstood the strain during labor remains intact and conceals the true nature of the trouble, which is best recognized by the introduction of the finger in the rectum, pointing upward and forward, when at once it will be seen that the fascial bridge has been ruptured and the thin wall of the vagina alone remains to hold the parts in position. Anatomists are divided as to the exact anatomical structure of the pelvis. It was believed by some that fibres of the levator ani ran transversely, forming loops behind the vagina and rectum. From the investigations of Webster, Browning and others, it would seem that such is

not the case. Webster states that three leaflets are given off from the retrovesical fascia which are of greatest importance to pelvic floor lacerations. One passing between the bladder and lower portion of the anterior vaginal wall; one between rectum and posterior wall; and the third behind the lower portion of the rectum. These leaflets are of great importance in securing the bladder, vagina and rectum in position. The fasciæ of the opposite sides of the pelvis unite in a median raphe. There are few, if any, muscle fibers except those of the sphincter ani, which cross the median line. It can then be easily seen why laceration, or more properly speaking, ruptures of the vagina occur between the vaginal sulci. This portion of the vagina being essentially made up of fascia, is less yielding than the muscular portions; pressure of the head being uniform seldom causes trouble, but the pressure from the shoulder being concentrated at one point, causes the overstretched tissues to give way and a rupture follows. The result of such lacerations depend entirely upon their extent. I doubt that many submucous lacerations are of sufficient extent as to require surgical intervention, and no doubt, often unite so closely as to prevent any serious trouble. It is not sufficient to depend upon a simple visual examination after labor, especially if forceps are used. If there is any evidence of a tear clots should be removed, a pack held against the cervix, and the vagina flushed so that a careful inspection can be made. Lacerations which materially affect the floor of the vagina are those which occur along one or both sulci, alongside the rectum, even extending through the perineal body. The vaginal portion severs more or less completely the fascial attachments of the pelvicoccygeal muscles to the rectum, as well as other fibrous structures connected with the perineum.

This being the strongest fascial attachment and playing the most important part in holding the muscles in position, so weakens the diaphragm that not only does rectocele occur but prolapse as well. The fascial attachment plays another important role. It supports the rectum as well, and when ruptured allows stretching of the muscular fibers of the rectum, resulting in dilatation of this organ, which, being weakened in consequence, allows accumulation of feces, resulting in constipation and marked

rectocele, one of the greatest sources of annoyance to women who are so prone to this condition. These tears have often to be repaired at once, but copious hemorrhage is frequently a serious obstacle, and I have always preferred waiting until the next day, when the margin of the wound could be freshened, the edges of the fascia more easily found, properly apposed and sutured. It is a mistake to attempt to do this work unless the field of operation is well in view, for too often the operation results in failure. The time allotted me for reading this paper will not allow a lengthy discussion of the many procedures recommended for the repair of these lacerations. Many physicians seem to be under the impression that merely denuding the tissues and bunching them together in such a way as to form a new perineal body is sufficient to repair the damage, but such is not the case. To properly repair these tears, especially if extensive, no operation can prove a success if it does not restore the tissues to their normal condition. It is necessary to secure the ruptured fascial attachments as nearly as possible and suture them in apposition. It would be poor surgery to attempt to fit each case to one operation. The Hegar, Emmet and Noble operations pretty well cover the class of cases requiring surgical interference, modifications and new suggestions have been offered by nearly every gynecologist who has done much of this work, many of which are excellent. An operation which I have performed in a number of appropriate cases with good results, and which I have not seen anywhere described, is one I saw practiced by W. J. Mayo, which is simple and quickly done.

A flap is lifted as suggested by Tait, the points of a pair of scissors are thrust in the tissues on either side of the rectum, opened up and drawn out; this at once frees the retracted edges of the fascia, exposes the border of the levators and relaxes the tissues in such a way as to bring them easily in contact in the median line. The sutures are introduced deeply into the sides through the muscle and brought forward in the median line in such a way as to lift the sagging rectum and coaptate the edges of the separated fascia when drawn together. In conclusion, I want to say that the object of this paper is to call your attention to a condition which my personal experience has taught me is often overlooked, and yet is too often the result of serious inconvenience to patients, who are constantly having resort to the numerous laxatives upon

the market in an effort to overcome a condition which is purely mechanical. It would be just as unwise to err on the other side, however, and operate on all women who had lacerations to cure constipation, as we would be certain to meet with disappointment.

Orleans Parish Medical Society Proceedings.

President, DR. JOHN J. ARCHINARD. *Secretary*, DR. AMEDEE GRANGER.
141 Elk Place, New Orleans.

In Charge of the Publication Committee, DR. AMEDEE GRANGER, Chairman.
DR. HOMER J. DUPUY and DR. E. O. TRAHAN.

MEETING OF FEBRUARY 9, 1907.

DR. A. McSHANE read a paper entitled

Epistaxis as a Symptom of Bright's Disease.

In the course of the last ten or twelve years it has fallen to my lot to treat a number of cases of severe epistaxis, in which a subsequent examination revealed the existence of albuminuria. I have not kept accurate records of these cases, but the association of albuminuria with epistaxis has seemed to me to be too frequent to be merely accidental; and it is solely with a view to arousing interest in this phase of the subject that these brief notes are presented to-night.

My attention was first distinctly aroused by a case of epistaxis occurring in an old white woman, age 74, who had been under treatment for fetid atrophic rhinitis. One night, very late, I was sent for to check a severe hemorrhage from the nose, which had considerably weakened the old lady before I arrived at her house. The nose was cleaned out and packed with iodoform gauze, and the bleeding was soon controlled. In the course of a day or two some remarks made by the patient caused me to examine the urine, and I found about ten per cent. of moist albumin. She

was placed on an appropriate diet and treatment, and passed out of my hands improved. The hemorrhage in this case was not from the septum, but from the inferior turbinated body. In this case, furthermore, there was more than one sufficient cause of hemorrhage; the atrophic process, with its ulcerative tendencies, as well as the degenerative changes in the vascular walls incidental to the albuminuria.

Some time after this, a case of bilateral epistaxis, in the care of a confrère, was found to suffer from Bright's disease, from which he died subsequently. The patient was a plethoric man of about 36 years. The case was not one of my own, but Dr. de Roaldes, in conversation, referred to it as the most violent one he had ever seen. The hemorrhage in this case was also from the inferior turbinated bodies.

The above cases were deeply engraved on my memory, and caused me to suspect, in other cases, an intercurrent nephritis, whether this were conservative or not. In the cases of epistaxis, in adults, that have come under my observation, I have found albuminuria so often that I am strongly inclined to look upon severe nasal hemorrhage as a danger signal that should not be disregarded. I regret that I have not kept detailed records of some typical cases; but, perhaps you would not enjoy a minute description of such a familiar thing as epistaxis, and I feel that I shall have done something useful if I succeed in arousing the attention of the general practitioner to a phase of the subject that properly falls within his province, and one that has been very generally overlooked.

This last statement may, perhaps, be subject to revision, for a reference to the literature of the subject shows us that it occupied a much larger space in the medical mind of former centuries than it does now. I was beginning to feel somewhat elated over a possible clinical discovery, when I realized, after a careful consideration of the older writers, that Galen had probably anticipated me by about fourteen centuries. Galen and the other ancients knew nothing of Bright, who came many centuries after them; but they could, and did, recognize a clinical entity as it must have presented itself to the keen eyes of these old observers—men who, in the absence of modern instruments of precision, had to learn

the autograph, so to speak, of each disease, as it was slowly written in the unchanging characters called symptoms.

Epistaxis has, from old, been dwelt upon as a critical phenomenon in the acute infectious diseases. The occurrence of epistaxis in severe headaches has been often remarked; but it is to be remembered that severe headache is frequently met with in Bright's disease. Nasal hemorrhage was also set down as symptomatic of certain chronic affections of the internal organs. In the "Reference Handbook of the Medical Sciences" it is stated that "epistaxis is often met with as the result of passive venous hyperemia from organic disease of the heart, lungs, pleura, kidneys, etc." In the course of his admirable article on "Epistaxis" John Noland Mackenzie significantly remarks that those who suffer from habitual epistaxis are subject to derangements of vision. It is scarcely necessary to remind you that albuminuric retinitis also means derangement of vision, leading even to total blindness.

Bosworth, in his work on "Diseases of the Nose and Throat," says that epistaxis is met with in various diseases, among these being diseases of the spleen and kidneys. He does not particularize as to the nature of the renal disease thus referred to, and indeed, there is a decided vagueness in all of the allusions to the occurrence of epistaxis in kidney disease. I make bold to advance a step by claiming a more than accidental relationship between epistaxis and renal disease, and, though not venturing to restrict it to Bright's disease, I feel that this latter disease is the one that pre-eminently among renal affections, predisposes to epistaxis.

A few clinical notes from recent experience may illustrate my point. I was called up at about 2 a. m. to check a profuse epistaxis in a young man of 17 years. The hemorrhage was unilateral, from the region of the septal cartilage, and was easily controlled with adrin and plugging with sublimate gauze. According to instructions, the patient next day sent me a bottle of urine, and I found about ten per cent. of moist albumin in it. No microscopical examination was made. The patient's albuminuria disappeared under treatment, and he has remained in apparent good health.

Another patient was a white man over 30 years of age, who consulted me for nasal polypi and occasional hemorrhages from the nose. I had operated on this same patient for adenoids when he was a boy. When I looked at his nasal septum, something in its

appearance caused me to mention albuminuria. The patient immediately caught up my remark and informed me that Dr. Thiberge had treated him for Bright's disease about a year before. The next day I examined his urine, and found some albumin in it; and I told him to have that attended to, which he did.

Of course, it is to be borne in mind that albuminuria does not always imply true Bright's disease, but may be transitory. On the other hand, we recall the many cases of true Bright's disease that go unsuspected until visual disturbance, or uremic symptoms reveal its presence. We should avail ourselves of every means offered for its detection. My conversations with a number of our representative practitioners have convinced me that one field of clinical investigation has been overlooked, and if the above contention be correct we should regard it as our duty to make it a practice to examine the urine in all of our cases of severe or recurrent epistaxis.

DISCUSSION.

DR. HAVA: The subject of epistaxis as a note of warning in Bright's disease appeals to me with a special force, for that disease has been for me the subject of study and experimentation during the whole of my professional life. As a result of my labors I have come to the conclusion that true Bright's disease (so-called) is primarily a disease of hemato-poietic origin, and that the kidneys become progressively altered secondarily, sharing in the general malnutrition with all the other organs, but being more vulnerable on account of the special nature of their functions. Many cases of obscure disease have come to me which, on examination, proved to be cases of albuminuria, evidently of long standing, but the symptoms were not always sufficiently characteristic to lead their medical attendant to suspect any renal disease (so-called). If, therefore, we can increase our means of recognizing the disease early in its course, we are thereby enabled to combat it before the general malnutrition has become hopelessly advanced. Nocturnal polyuria is, in my estimation, one of the earliest signs that should excite a suspicion of albuminuria. Several of Dr. McShane's cases of epistaxis were subsequently treated by me for Bright's disease, and it is certainly fortunate for us if we learn to look upon nasal hemorrhage as an index of possible albuminuria. This

consideration should stimulate us to make it a routine practice to examine the urine whenever a case of epistaxis comes under our observation. Some of my confrères have expressed surprise that I so frequently find albuminuria. This explanation is exceedingly simple; I find it because I am always on the lookout for it.

DR. DUPAQUIER: In many cases Bright's disease, so-called, is ushered in with or without albumin by still and quiet symptoms which must be scented out and tracked. Light epistaxis, chiefly in the morning, is one of them. This insidious onset is far from being rare. In many cases, looked upon as severely acute, swift and sudden, there has been going on silently a slow evolution, an unrecognized condition. I will recall here one of my cases in a few words.

A young Norwegian, sailor aboard ship in port here, apparently in good health up to the time of his present illness, that is, he considered himself in good health, consulted me about symptoms that had troubled him for two weeks, namely, headache, vomiting. I found his eyelids puffed and his urine having albumin. At first I thought it was a case of acute nephritis of recent date. But upon inquiry, looking for the details of the history, looking for symptoms preceding this attack, I was told that eight months prior the patient had had headaches; he would have at times to wake up at night three or four times to urinate; he would have at times pains in his legs; his index finger would feel like dead; his eyelids would look puffed; he would blow his nose in the morning upon awaking and find a few drops of blood; he would experience noises in his ears, hard-hearing, itching spells and sensations of chilly knees and back.

All these symptoms, now collected, which were as they appeared dissociated, proved that my patient had had Bright's disease for eight months back and he had never suspected it.

It is accepted that usually cases occur like this one, with a slow and insidious onset. Over a long period a series of symptoms, apparently insignificant, appear or disappear, alone or combined, before the edema, anasarca and other great symptoms of the well established Bright's disease make their appearance, and usually these forerunners are overlooked and the real condition of affairs remain unrecognized. Thus, the headaches might be mistaken for syphilitic cephalalga, the palpitations with angina pectoris for dis-

ease of heart and aorta, the digestive disorders, with or without pain, with or without vomiting, might be mistaken for an ulcer of the stomach. Thus it is that acute exacerbations in kidney disorders are mistaken for acute, swift and sudden Bright's disease.

All these forerunners should be grouped under the proper term of "small accidents of Brightism," according to the well known French clinician Dieulafoy. Of these accidents, Dr. McShane has called our attention to epistaxis. Epistaxis occurs in the course of Bright's disease, in different degree, thus we are familiar with the profuse epistaxis appearing shortly before and during uremia. But the epistaxis of Bright's disease is as a rule very light, only streaks of blood appear, and it occurs usually in the morning.

Now, what is the remote cause, and what is the immediate cause of this circulatory disturbance in particular?

This question is of great moment for the correct conception of Bright's disease. If siding with many, we agree that the remote cause is due to arteriosclerotic changes as early as the onset of Bright's disease, or if siding with many others we agree that the immediate cause is "hypertension," without arteriosclerotic changes as early as the onset of Bright's disease, we either way, or in both ways, agree that arteriosclerosis plays a great part in Bright's disease, and that Bright's disease is a condition not characterized by nephritis, since Bright's disease may exist without nephritis, but we therefore agree that "hypertension" is from the early to the remotest periods of Bright's disease the main feature and characteristic. This conception of the morbid process is suggestive of valuable indications for treatment, since we can act at a time when the course of the disease might be arrested and life prolonged and made comfortable. It is indeed a source of gratification to know that to-day we can detect Bright's disease at an early date, and that as we conceive it we can arrest it. It is gratifying to know that we can do more in Bright's disease than hopelessly relieve the symptoms of the more advanced stages, as heretofore arteriosclerosis and hypertension at an early period are the keynotes to useful treatment.

DR. THIBERGE: The case alluded to most probably falls under the condition of orthostatic albuminuria rather than real nephritis. In a case of epistixas I made repeated examinations of the urine and never found any casts. I gave lactate of strontium and the al-

bumin disappeared. I think the case one of hypertension rather than nephritis. Have had three cases in which albumin was always present, but no casts could be found. In one case the albumin has practically disappeared under treatment, and after three or four months the patient shows no symptoms of Bright's disease.

DR. DUPUY: Have had six cases, at least, of severe, profuse hemorrhage, in all of which the evolution of the epistaxis showed the association of nephritis to perfection. In one case I had to remain at the bedside four or five days fighting the profuse blood loss by means of constant plugging. As you know, 95% of cases of epistaxis arise from this point on the anterior part of the septum (Dr. Dupuy here drew diagram on board indicating the point). Hemorrhage from this point is usually of simple nature, whereas epistaxis, associated with nephritis, in my experience, comes from several points in the nasal cavities and never from the septum. It is very interesting and most important in making a diagnosis to differentiate between the point or points from which the hemorrhage arises in epistaxis, due to simple causes, and that associated with nephritis. I would like to know from Dr. McShane whether this differentiation is diagnostic?

DR. JACOBY: I would like to know if any one has ever tried calcium chloride, two grains every two hours by needle being given till hemorrhage ceases. It may also be given by infusion, together with a normal salt solution.

DR. MCSHANE, answering Dr. Jacoby, said that he did not have any experience with calcium chloride.

DR. MCSHANÉ, in closing: Replying to Dr. Dupuy, I would say that, in my experience, the epistaxis always arose from the anterior portion of the septum at the point indicated by you, and never from several points in the nasal cavities, as you have found.

DR. E. S. HATCH read a paper entitled

Sacro-Iliac Diseases Illustrated, with Report of Cases.

When one thinks of sacro-iliac disease he generally thinks of tubercular bone disease, or as something akin to tubercular hip disease and Pott's disease. The subject I wish to call your attention to this evening is in that sense not a disease, in that it does not have to do with the breaking down of bone by any pathological process.

Again, I think that most of us, when we study the anatomy of the sacrum and ilia, do not think much about the sacro-iliac joints being true joints.

The text books on anatomy, in speaking of these joints, put them under the general type "Amphiarthrosis."

Gray says: "Each articular surface is covered by a thin plate of cartilage, thicker on the sacrum than on the ilium, the surfaces of these cartilages in the adult are rough and irregular and separated from each other by a soft yellow, pulpy substance." "At an early period of life, occasionally in the adult, and in the female during pregnancy, they are smooth and lined by a delicate synovial membrane."

Now, I am going to try and show you by reference to the cases here presented, and by reference to a very valuable paper on the subject by Dr. J. E. Goldthwaite, of Boston,* that in many cases there is quite a marked movement of these bones in relation to each other, and that real dislocations do exist.

This, I believe, will explain many puzzling symptoms which patients present, and which we were at a loss to show cause for until within the last few years. The motion of these joints usually takes place either forward at the tip and backward at the base of the sacrum, or *vice versa*. But I believe that one of my cases will show that at times there may be separation enough between the bones to allow of very slight motion in a plane at right angles to this one.

This, of course, either means that the sacrum moves on the ilia or the ilia move on the sacrum; the motion is upon a transverse axis and the axis seems to pass through about the middle of the sacrum.

Dr. Goldthwaite's classification of these cases, which I think covers the ground perfectly, is as follows:

"Class I: Cases in which there is definite relaxation associated with pregnancy, representing an exaggeration of a normal physiological condition.

"Class II: Cases in which the relaxation is associated with menstruation, apparently representing also a physiological condi-

* Goldthwaite, J. E. and Osgood, R. B. A consideration of the pelvic articulation from an anatomical pathological and clinical standpoint. *Boston Medical and Surgical Journal*, Vol. ciii, 593-634.

tion, apart from any pathological change with which we are familiar.

“Class III: Cases in which the lesion is due to trauma, general weakness, or to some definitely known pathological process.”

It goes without saying that the first two classes are found only in women, but that the sex in the last class plays no part except that I think that men seem more liable to strain this joint than women do.

In the third class quick sprains or strains of the joint occur, as will be brought out in one of the cases reported, and at other times the trouble may come on more slowly, as in hypertrophic and atrophic arthritis of these joints. Faulty attitudes in standing and walking or in lounging may make the joints become weakened or displaced.

Dr. Goldthwaite believes that in some cases there is a developmental peculiarity which lessens the stability of the joints.

Symptoms: Backache seems to me to be the symptom most often found, and sometimes they can point out the spots which ache, in other words it is a localized backache. This occurs when the patients are lying down as well as when they are standing, and sometimes they speak of being waked up by a severe pain, probably due to the fact that when the patient is asleep the muscles of the body are all relaxed and the sacrum tends to drop backward.

Dr. Goldthwaite says that in some severe cases even standing or walking is impossible, but I have never seen a case that was bad enough to show this, but I have had patients tell me that when they got into certain positions, such as crouching or kneeling down, that it was very hard for them to get up, and practically impossible for a time.

The pains are often referred down the legs and are due to nerve pressure, sometimes the fact that in some cases the pains come and go may help in making a differential diagnosis.

Among the objective symptoms to be noted the following are the most marked: The lumbar curve is either obliterated or there may even be a curve in the other direction, the photographs of one of the cases reported shows this very well. Sometimes we see a lateral deviation of the body.

The forward bending is always limited and the patient sometimes

brings up with a jerk, as Case No. 2 will show. The lateral bendings are always very guarded.

It is sometimes hard to prove that the sacrum really moves, but by grasping the crests of the ilia with both hands and having thumbs resting on the sacrum it is often possible to feel the movement of the bones when the patient moves his legs.

To my mind one of the best symptoms, and one which I have never failed to find, is that in raising the extended leg with the patient lying on his back on a table, one finds that the patient complains of pain before the leg has been raised but a very few degrees.

This is due to the fact that the muscles which are attached to the tuberosity of the ischium are stretched. Then if we keep the patient in the same position and raise the leg with the knee bent, it can be raised much higher without causing pain.

Treatment: In the treatment we are guided by the rules laid down for other dislocations, which are mainly protection of the joint after the parts are placed in their proper relations.

When the patient is in bed the placing of a pillow under the back, low down, helps by pushing up the lumbar spine.

The mechanical means for holding the bones in their proper positions are, (1) adhesive plaster strapping, (2) plaster jackets or leather jackets made over a plaster model, (3) spring steel back brace or the "Osgood brace", (4) elastic trunks made to accurate measurement.

The plaster strapping is at once a simple and very good method of holding the joint, but as the plaster must be removed and renewed as often as it stretches, it often is very irritating to the skin. I like to use this method to relieve the immediate pain and to prove to the patient that there is a cause for his suffering which can be relieved by mechanical means.

In using the plaster jacket one must always remember that the dislocation must be reduced before the jacket is applied, otherwise the patient will suffer more with the jacket than without it, as when the jacket is on he can not relieve any pain that he may have by changing the position of his body.

To do this we may put the patient's head on one table and his feet on another with the back uppermost, and the weight of the body will drag the sacrum into position, then the jacket is put

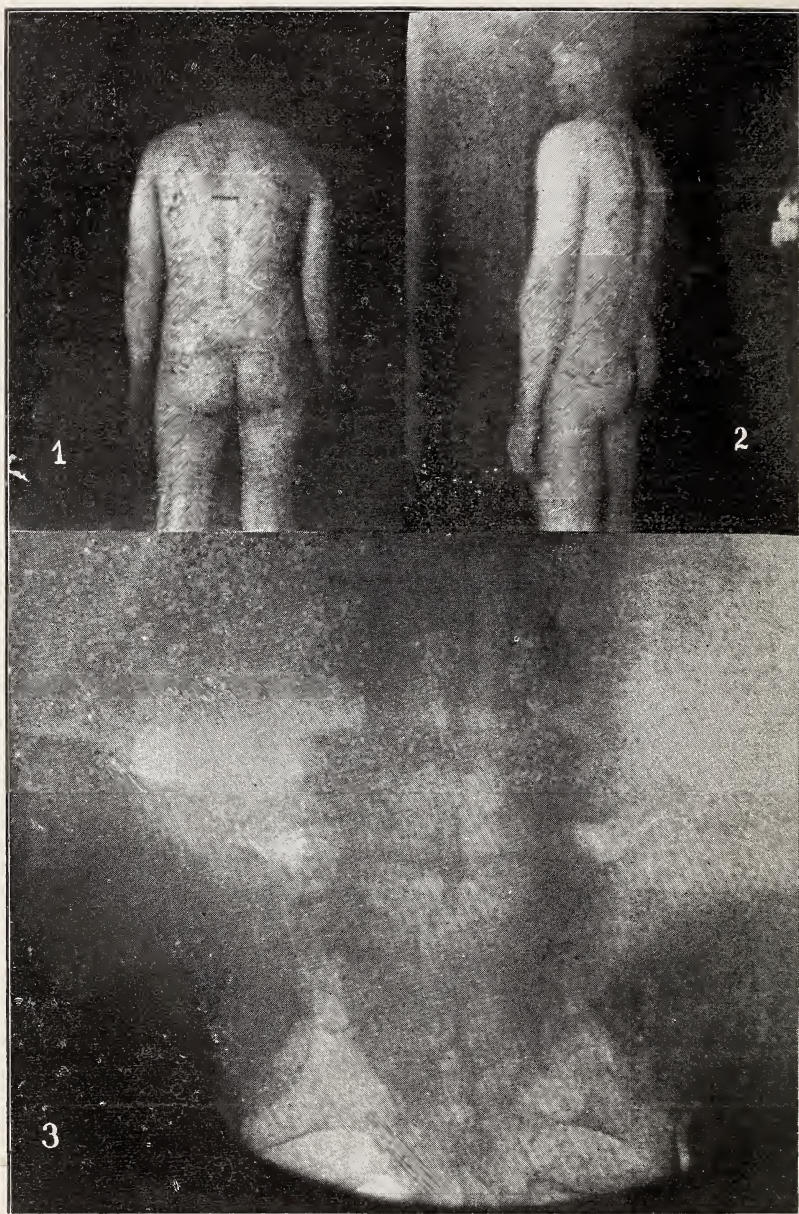


FIG. 1—Note the slight list to the left in standing and the loss of the normal lumbar curve. The marks on the back are due to adhesive plaster strapping put on before I saw the case.

FIG. 2—Note the loss of the normal lumbar curve, which shows very well in this position.

FIG. 3—Note the slight displacement and the tilting of the sacrum to the left, also the wide interspaces. Compare with the back view of the patient.

on in this position. I think that it is easier and better to use a frame either portable or stationary, and make the curve in the steel bars low so that the pressure of the bars will push the sacrum into place. Then the jacket is put on and the bars removed after the jacket is hard.

Sometimes it is necessary to carry the plaster very low and include one or both legs, making a spica.

Later a leather or celluloid jacket can be made from a plaster model which is much more comfortable for the patient.

A spring steel back brace after the "Taylor" pattern may be used with the uprights fitted well into the upper part of the sacrum.

Dr. Osgood, of Boston, has made and used a brace for this disease which is composed of a sacral pad fitted into the sacrum and held in place by spring steel bands attached to a corset.

One of the best supports is the elastic knit trunks made to accurate measurement. They exert pressure in all directions.

In regard to how long the treatment must be kept up in a given case I know of no fixed rule to follow; some cases seem to respond to treatment much quicker than others.

CASES.

CASE 1. Mr. K., referred to me by Dr. R. M. Van Wart, on October 27, 1906. He was 39 years old and a motorman. Family history unimportant. Past history: Had always been well and never had any severe illness; one day four years ago while bending down to lift a heavy weight he said that he could not get up readily, and had a good deal of pain in doing so. Then he began to have pain in the lower part of his back and he does not think that he has ever been free from pain since. At times the pains are very severe and often run down one leg or the other. Very often when he gets into a crouching position he has great difficulty in getting up. He once had a plaster jacket applied for the backache but it gave him no relief.

Examination: Well developed and nourished man stands with slight list to the left. He can bend forward fairly well, but there is a marked limitation in lateral and backward bending. The normal lumbar curve is lost, there is some tenderness over the sacro-iliac joints, but more over the middle of the low lumbar spine. Raising either extended leg was painful and the motion was much

limited. I could not make out any actual motion by palpation. X-ray showed sacro-iliac dislocation.

Treatment: A felt pad was put over the sacrum and the joints were held in place by adhesive plaster strapping. Patient returned in one week and said that he had very little pain since the strapping, and that he had chopped wood and taken various positions, but that he had been unable to bring back the old pain. Then I advised him to let me put on a plaster jacket on the frame, but he said that the plaster jacket he had had on before made him worse and that he never would have another one put on.

I tried my best to convince him why his pain had not been relieved by the other jacket he had worn, but as he refused absolutely to have another plaster jacket put on, and was not able to afford to have any other kind of apparatus made, I restrapped his back and have not heard from him since.

CASE II: Mr. F., referred to me November 15, 1906, by Prof. Halsey. He was 25 years old and a medical student. Family history negative. Past history: Always well except for a bad attack of typhoid fever four years ago. Present illness, November 11 at about 11 o'clock p. m. he was taken with a severe pain in the region of the sacro-iliac joint. This has continued and been worse at night, but he has not been free from pain at any time since the trouble began. The pain has gradually been getting worse.

Examination: Very well developed and nourished man, the lower part of the erector spinæ muscles on both sides are in spasm. In forward bending he goes forward for a short distance and then brings up suddenly with pain. Tenderness over the right sacro-iliac joint; I could not get any actual motion in the joint. On trying to raise the right leg extended there was much pain, and it was impossible to raise the leg but a few degrees. He bends slightly better to the right than to the left, but all motions are very guarded.

Treatment: Felt pad and adhesive plaster strapping with forward pressure over the sacrum. Nov. 18, has been gradually improving since the strapping, right leg extended can be raised degrees higher than at last visit. Much less tenderness over the joint. The X-ray having proven the diagnosis I reapplied the strapping, putting the pressure in a downward and forward direction. Measure taken for elastic trunks. Nov. 24, has had no

pain since the last visit. Elastic trunks applied. I have seen the patient several times since the last visit, and he tells me that he has had no return of the old pain.

DISCUSSION.

DR. McILHENNY: The main point that Dr. Hatch evidently wished to emphasize was that sacro-iliac disease may be caused by a trauma of some kind, and that it is not always due to some other disease. This point was very decidedly impressed upon him by a case in a man 62 years old, a muleteer on a British transport going to South Africa. Before reaching Cape Town the men were ordered to "muck out" the ship; while the patient was throwing the refuse of the stalls over the side of the ship with a pitch-fork he experienced a sharp pain through the lower part of his back, just to the right of the sacrum. He fell to the deck and was unable to rise; when finally raised by some of his fellow muleteers he was unable to stand without a considerable amount of pain and discomfort. He was ordered to bed, and as there was no adhesive plaster on the ship, heavy padding was placed over the sacrum and the anterior superior spines, and a wide leather belt was passed around the pelvis and drawn as tightly as could be comfortably worn; this substitute for strapping gave immediate relief, and the patient was kept in his bunk for three weeks and then allowed to move about. He finally recovered completely. This case was decidedly traumatic. In Mr. Tubby's clinic, in London, the doctor saw a girl 14 years old suffering from what seemed to be a tubercular sacro-iliac disease. She had had pains over the sacrum for three months, and pressure over the right side of the sacrum and lateral pressure on the pelvis caused considerable pain; the right leg was slightly abducted and was a little longer than the left. A radiograph that had been made showed an abscess and a tubercular focus in the superior portion of the sacro-iliac synchondrosis on the right side. Dr. McIlhenny saw two cases in Hoffa's clinic in 1904 and 1905. One case was in a boy 18 years old, and the radiograph showed an abscess. The second was in a man of 24 years who injured himself while turning somersaults in a circus. There has been very little written on the subject in this country, and practically nothing in Europe; Tubby, of London, and Lange, of Munich, have reported cases, but no one seems to have gone

into the subject seriously or deeply. The most prominent and characteristic symptom of this condition is the pain which is almost always present, and which becomes very annoying unless something is done to alleviate it. Sciatica is the condition most often confused with sacro-iliac disease, and when there is no deformity and a radiograph can not be taken it is very hard to distinguish the one from the other; the pain of sciatica, however, is more persistent than that of the other condition, and does not respond so readily to treatment.

Traumatic sacro-iliac disease may be seen in cases of all ages, although it is more often found in adults than in young persons. Tubercular sacro-iliac disease, on the other hand, is limited almost exclusively to the middle of the second decade of life. This may be due to the fact that more violent exercises are taken during adolescence, and some slight irritation might thereby be caused in the sacro-iliac joint, which makes a good field for the tubercular germs. All traumatic cases may become tubercular, but it is very evident that some cases are traumatic simply, and have nothing whatsoever to do with tuberculosis.

Dr. Hatch has covered the treatment of this condition so thoroughly that it seems almost superfluous for me to say anything in regard to it. However, I will merely give an outline of the treatment as it is carried on in Hoffa's clinic in Berlin, and in some of the other clinics I had the opportunity of visiting. As a rule Hoffa has the patient kept in bed for about two weeks so as to get as complete muscular relaxation as is possible; the patient is then placed on a table with his face downwards, and a pad about one foot in thickness is placed under his shoulders, and a similar pad under his hips; this causes a hyperextension of the spine, and brings the displaced parts into their proper position; a plaster of Paris bed is then molded to the back so that it fits evenly and comes well down over the sides; it is strengthened with strips of tin and allowed to harden, when it is removed and trimmed, strips of elastic tape are attached to one side of the plaster with buckles on the other side over the pelvis, so as to bring about constant lateral pressure in the plain of the disease; tape strips are placed over the abdomen and thorax, so as to hold the cast in its proper position, and it is then applied, after which the patient is kept in bed for two weeks and then allowed to walk around for a little

time each day. If the case is purely a traumatic one the treatment does not cover so long a period as is necessary in those of tubercular nature. Traumatic cases recover much more rapidly than tubercular cases, and as a rule they can be discharged after a few weeks' supervision, whereas the tubercular cases demand constant supervision for a very long period. No matter whether the case be traumatic or tubercular, it primarily demands rest and thorough support of the diseased part. If we can obtain these we may look forward to obtaining a good result. Lange's treatment is practically the same as that of Hoffa except that he uses celluloid for his corrective bed. Both consider that in all cases rest is pre-eminent, and in tubercular cases too much stress cannot be laid upon the support of the joint in such a manner as to render it immovable. I had the pleasure of seeing one of Dr. Hatch's cases, and was very much interested in noting the marked characteristic symptoms that it presented.

DR. VAN WART: The first case, Mr. K., I saw one year before Dr. Hatch. He complained of pain in the leg, pain in back, stiffness in back, pain in standing. At that time the fixation of the back, the pains in the legs, and the conditions present led to a diagnosis of arthritis deformans of the spine. A plaster cast was applied but gave no relief. Dr. Hatch made X-ray picture and diagnosis. X-ray is necessary to make diagnosis. Case of Mr. K., a very muscular man who had pains in the legs. In those cases, owing to the tone of the muscles, they react very readily to treatment. A number of cases have come under our care.

DR. RICHARDS: Saw a case in my rowing mate. While rowing he experienced a sharp pain in the right side. On examination I found slight dislocation of sacro-iliac joint. Applied adhesive straps and advised rest. Strapping gave relief and patient was laid up for two months. Sorry to say patient did not get as well as Dr. Hatch's.

DR. HATCH, in closing, said that he thought all the points in the diagnosis and treatment had been brought out, but he spent some time in explaining again the X-ray pictures shown, and in comparing them with some pictures of normal sacro-iliac joints.

DR. ARNOLD LORAND, of Carlsbad, Austria, a guest of the Society, read a paper entitled

On Diabetes and Obesity; Causation and Treatment.

These diseases are caused by alterations of the ductless glands. These glands, by their internal secretions, augment the oxydations in the body, which, on the contrary, are diminished after their degeneration. When the pancreas is extirpated diabetes follows in each case. The orator has done this operation together with Professor Minkowsky on several dogs, and after rendering these dogs diabetic he has shown that the thyroid gland of these dogs was in a condition of hyperactivity with hypersecretion of the colloid substance. Extirpating the thyroid gland of diabetic dog, in each case diabetes has disappeared, sugar not being found, even in traces. Diabetes can also be caused in persons with hereditary tendency to diabetes by taking large doses of thyroid extracts. The adrenals can also cause glycosuria by injecting their extract into animals.

Diabetes can develop more easily in persons who take for a long time much meat, especially when they take at the same time much starchy food. This may be explained by the fact that abundant meat food can cause a condition of hyperactivity in the thyroid gland (Breisacher, Chalmer, Watson, Lorand). On the other hand, as shown by Sobolew, the ingestion of large quantities of starchy food in animals produces a degeneration of the Langerhaus islets, the part of the pancreas that plays the most important part in the origin of diabetes. It is very important to detect diabetes at its outset, for the sooner the dietetic treatment has begun the better is the outlook. There are hundreds of cases of diabetes (as also of interstitial nephritis) that show no subjective symptom whatever, the only symptom being the presence of sugar in the urine. Therefore it is necessary to examine the urine of every patient for any disease, especially before any operation, thus concealed cases of diabetes being recognized. Any operation on diabetics might be followed by fatal issue in a few days, with coma. Even on examining the urine of 24 hours in light cases of diabetes the sugar may not be found out, but giving to such patients a test dinner with honey and grapes, and examining the urine afterwards, we may be able to detect 8% of sugar in cases where the

ordinary examination did not reveal more than traces. By such test dinners the life insurance companies may be saved from severe losses, the insurance of diabetics being very risky on account of the frequent complications with fatal issue.

A light case of diabetes may be distinguished easily from a severe case by examining the urine after 2 days of a diet with meat and green vegetables only. If there is still sugar it is a severe case. In the most severe cases there is diacetic acid present, which can be detected by giving several drops of a solution of perchloride of iron in a test tube of urine. The presence of diacetic acid is shown by the cherry color of the liquid. This shows a condition of acid intoxication and the probability of a fatal issue within one to two years by coma. Such a condition can be caused even in light cases by insisting for a long time in an exclusive diet of meat and fats as animals also get, as shown by experiment, diacetic acid after such feeding. Therefore the best treatment of diabetes is by mixed diet with a small amount of carbohydrates allowed to every case, the best in the shape of bread, milk and fruits, like a few apples, oranges, or peaches. The fruit contains fruit sugar, and that is better tolerated than grape sugar (glucose). If there is diacetic acid about 24 drams of carbohydrates must be given daily, and besides, large quantities of alkalines. This also explains the great use of alkaline mineral waters in diabetes. In light cases the sugar may disappear entirely, and in severe cases, if not in every case, at least the sugar goes down and the diacetic acid may disappear by giving alkaline waters and at the same time together with bicarbonate of sodium.

OF OBESITY there are two classes. The one is caused by overfeeding and lack of exercise. The other has nothing to do with overfeeding, but as the writer has shown in a communication to the French Congress of Internal Medicine, Paris, 1904, it can be caused by degeneration of the ductless glands (thyroid, testicles, ovaries, pituitary body). All agencies that are deleterious to any of these glands, castration, sexual excesses, many pregnancies, infectious diseases, old age, etc., can be followed by obesity. The fat of such persons is also clinically and anatomo-pathologically different from the cases by overnutrition. They all look pale, the fat is like bacon. Therefore the writer called it "bacon obesity." They never perspire and always feel cold, and are obstinately con-

stipated. In such persons gallstones develop more readily. The best treatment is the etiological by thyroid, and ovarial extracts in fat women after alteration of the sexual glands. In cases of overnutrition diet and purgative agents. On account of the shortness of time the writer cannot enter upon details, but refers to his books in German and French and publications in the *Presse Médicale*, *Archives Générales de Médecine* (C. R. Société de Biologie of Paris), Transactions of the London Pathological Society, 1906, and Dr. Sajous' Monthly Cyclopedia, 1906.

Miscellany.

THIOSINAMIN IN CICATRICIAL STRICTURE OF THE ESOPHAGUS.—Dr. K. Pollar relates a case observed in the service of Prof. E. Neisser, of Stettin, which establishes the efficacy of thiosinamin in cicatricial strictures of the esophagus. The patient was a man of 30, who contracted esophageal stricture as a result of swallowing caustic soda. The stricture permitted the passage of a very fine sound, and of very soft food; but, at the end of several years, in spite of the methodical passage of sound, the atresia became impassable, and the patient was unable to swallow even liquids. A gastric fistula was made, by means of which the patient was abundantly fed, but he became worse, notwithstanding. Then, half a cubic centimeter of the following solution was injected into the forearm: Thiosinamin, 2 grams, dissolved in 8 grams of glycerin, to which were added 10 grams of distilled water. Two other injections were made in the course of five days. After the third injection it was easier to introduce a slender sound down to the bottom of the stomach, and the patient was able to swallow liquid food. Two weeks later, a sound as thick as the little finger was passed, and the patient could swallow purees. One month later the largest sized sound was introduced without difficulty, and the patient was eating solid food.—*La Habana Medica*. (A. M's.)

N. O. Medical and Surgical Journal.

Editorial Department.

CHAS. CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

A Deserved Recognition of Col. Gorgas.

Col. W. C. Gorgas, who has established a sanitary regime in the Canal Zone, has at last been made a member of the Isthmian Canal Commission.

As Chief Sanitary Officer Col. Gorgas has lifted the chaotic conditions of indifference to morbid influences into an active interest in a moral and physical usefulness for the whole Canal Zone.

He began with a stupendous task, no small part of which was the antagonism of the political side of the Commission, itself expressed chiefly in red tape and conflict in authority.

It required, however, only the righteousness of time to demonstrate the elemental fact that the sanitation of the Canal Zone was absolutely prerequisite to the labor proposition. To any one who has followed the regular reports of the sanitary office of the Isthmian Canal Commission, the improvement during these three years of service of Col. Gorgas and his associates is only too evident. Infectious diseases have been reduced in some instances to nil, and in others to a controllable minimum. Intelligent draining of the territory contiguous to the projected line of the Canal, and either side of the Panama Railroad, has resulted in the reduction of mosquito infection until this menace has also reached a point of control.

The work, of course, is not yet finished, but with an exalted idea of duty and the additional power to fill the same as a member of the Commission itself, we feel sure that Doctor, now Colonel, Gorgas, with the assistance of his faithful adherents and collaborators, will satisfy the estimate of him which his friends here and elsewhere entertain.

Medical Education Advanced in Kentucky.

The Medical Departments of the University of Louisville and Kentucky University have united, according to the *Kentucky Medical Journal*, the official organ of the State Medical Association. This *Journal* also notes the rumor of the combination of the Hospital College of Medicine and the Louisville Medical College, the new institution to be known as the Medical Department of Central University. This is the second time that Louisville has recognized the need of diminishing the number of its medical colleges with the idea of bettering the educational question, and it is to be hoped that the same intelligence will direct a further organization of these schools into a consolidated institution.

Louisville is not alone in recognizing that the future of medical education demands the concentration of efforts, teaching ability as well as the conservation of finances. Harvard has opened up a magnificent institution for the advanced education in medicine, making the standard so high that only college bred men may attain to the medical degree. It is only a question of time when the wealth of other great universities will find expression in a similar demand.

The whole of the United States has been slow to recognize the need for the highest attainments for the medical graduate, and this has reflected considerably upon the profession of this country in comparison with the education of the medical man in continental Europe. The striking exceptions have been solely due to the individual in the profession and not to the requirements or opportunities afforded.

The United States is now old enough both in the recognition of methods and in actual chronologic experience to meet the demand for higher medical education. The present underpaid profession, the vast amount of forced competition, the array of charlatans derived from the ranks of under-educated medical graduates, all argue that the remedy must consist in making the qualifications for a medical diploma sufficiently high and rigid as to necessitate a standard of education as well as of morality.

The Promotion of James Carroll.

Our readers will easily recollect our editorial expression of last month, calling attention to the claims of then Lieut. James

Carroll, U. S. A., for promotion. We are glad to announce that he has been made a Major, and feel sure that there will be general approval, and especially on the part of the medical profession of this State and section.

Osteopathy in the District of Columbia.

A very important bill, entitled "An Act to Regulate the Practice of Osteopathy, &c.," in the District of Columbia, was fought over very earnestly by its adherents on one side and the regular medical profession of the United States on the other. It is well recognized that this act was intended as an entering wedge by the osteopaths, and would have served to give them a certain degree of recognition by the national government. It was recently killed in the District of Columbia Committee by a vote of over 2 to 1, and the victory may be considered as one of some importance. The Committee on Medical Legislation of the American Medical Association had labored assiduously to defeat this bill, and they were materially assisted by the earnest efforts of Hon. A. J. Barchfeld, M. D., who was a member of the Committee to which the bill had been referred. Dr. Barchfeld had expressed implicit confidence in the good judgment of the members of the District of Columbia Committee, and took personal charge of the work against the bill. He is to be congratulated upon the successful issue of his fight, and the members of his Committee as well for their sound conclusion. The American Medical Association, and especially its Committee of Medical Legislation, also shared in the credit for the victory. Our Congressman, General Meyer, who is also a member of the District of Columbia Committee, had promised to interest himself in the question and no doubt did what was proper under the circumstances.

If the medical profession, especially through its State and national associations, more frequently took the initiative and acted in a united manner on subjects that interest not only the profession, but deal with the general welfare of the people, there is no doubt that tangible results would follow.

The Registration of Nurses in Pennsylvania.

The medical profession of the State of Pennsylvania are very much exercised at the attempt to pass a State law for the registration of nurses. They quote in a circular to the profession some of the experiences of New York and New Jersey, where such laws have been adopted, and claim that the law becomes a positive menace to the public good and that the nurses in asking for these laws are working against their own interests. They claim that this attempt for recognition in the passage of a State law chiefly covers a desire to maintain and raise prices. The Northampton County Medical Society adopted a resolution disapproving of the movement and of the fixing of \$25.00 as a minimum charge per week, thus depriving poor people of nursing assistance.

We all remember the attempt made in this State three years ago to pass a law for the registration of nurses, which failed because the Constitution of the State does not admit of State Boards composed of females, but in addition to this there was a great deal of objection on the part of the public, and although many of the profession were inclined through sympathy for trained nurses in general to support the movement, there were others who disapproved. No doubt today the consensus of opinion would be against such a measure, and we hope that the opposition shown in an organized way by the medical profession of Pennsylvania will cause trained nurses as a body to give proper heed to the warning issued as to the duties and limitations of nurses, as well as their proper relation to the medical profession and the community.

Abstracts, Extracts and Miscellany.

Department of Surgery.

In Charge of DR. F. W. PARHAM, Assisted by DR. F. LARUE, New Orleans.

WOUND OF THE PERICARDIUM SIMULATING INJURY TO THE HEART.—Mr. Maclaure, in *Tribune Médicale*, February 9, 1907, addressing the Société de Chirurgie, said that Mr. Quenu, in a

previous report on suture of the right ventricle of the heart, had remarked that in a very interesting observation of Mr. Baudet, neither the loss of the blood, which was *insignificant*, nor the mechanical compression of the heart by the effusion, could account for the symptoms presented, viz.: Initial syncope, rapid breathing, irregular and quick pulse, hypnothemia. Mr. Quenu believes that in such a case disturbance of heart innervation supervenes. Mr. Mauclore, after mentioning a similar case occurring in Lyons, related the following:

A man, *æt.* 60 years, was admitted to Bichat Hospital December 11, 1903, for a gunshot wound of the precordial region. Patient complained of excruciating pains in that region; marked pallor, face bathed with perspiration, irregular and short breathing; pulse thready, irregular, at times imperceptible. On percussion, precordial dullness seemed much increased vertically; the heart sounds feebly audible.

Mr. Mauclore diagnosed heart injury with pericardial effusion. Operation revealed that such was not the case. Mauclore found a *tangent wound of the pericardium* at the extreme left of its anterior surface. The heart was uninjured. The pericardial wound was closed, with a tiny drain in the cavity; a similar drain was placed in the pleural cavity. The pains persisted after the operation, and the patient succumbed within 48 hours from progressive weakness.

The pericardium alone was injured, with all symptoms of heart trauma. Possibly the heart may have been slightly contused, but no such evidence was found. In explanation of the pains and reflex conditions observed in wounds of the pericardium, one must remember that the pericardium is abundantly supplied with nerves and is normally very sensitive, especially on its outer surface, as demonstrated by Rochefontaine and Bouceret.

In pathological conditions this sensibility is known to be increased. A wound of the pericardium with or without contusion of the heart can give rise to the principal symptoms following a wound of the heart.

With such complex symptoms accompanying a penetrating wound of the pericardium, one should not affirm the existence of a cardiac wound; nevertheless, if in doubt, exploratory pericardotomy is indicated.

EXTIRPATION OF EXTERNAL SEMILUNAR CARTILAGE OF KNEE JOINT FOR RECURRENT PARTIAL DISLOCATION.—Mr. Chaput, in *Tribune Médicale*, January 12, 1907, reports for Mr. Michon the case of a man aet 37 years with incipient pulmonary tuberculosis. Twelve years ago, whilst crouched, he felt on arising a severe pain with a cracking in the knee.

A painful swelling of the joint caused patient to remain in bed for 10 days. For five years he was free from this trouble when, one day, being seated in a chair and attempting to get up, he experienced the same symptoms. Similar attacks were more frequent, the patient always feeling a dull pain, increased by pressure, along the joint line between the bicipital tendon and the ligamentum patellæ.

There was an abundant effusion in the joint and a marked atrophy of the femoral triceps.

Pain was marked on a level with the anterior portion of the external semilunar cartilage; there was also localized thickening. Mr. Michon operated January, 1905, by making a transverse incision along the articular line between the ligamentum patellæ and the biceps; he found the corresponding fibro-cartilage quite displaced from the tibial plate. The anterior insertion of the cartilage was severed with scissors, causing it to curl up like a spring. It was cut as far as possible posteriorly, leaving a portion of its posterior extremity.

The joint was drained, aponeuroses united with catgut; rapid union. The patient, seen again eleven months after, stated that he had been free of pain. He walked with ease.

This observation is very interesting on account of its rarity, as there had not heretofore been a similar case reported to the Société de Chirurgie.

Department of General Medicine.

In Charge of DR. E. M. DUPAQUIER, New Orleans.

APPLICATIONS OF OPSONIC INDEX.—Bossan, in *Gazette des Hôpitaux*, January 24, 1907, reports original experiments as regards the action of brewer's yeast in staphylococcic infections

He determined the opsonic index of a large number of patients suffering from staphylococcic infections, phlegmons, abscesses, osteomyelitis, furnacles, carbuncles, lymphangitis, in his wards in the *Hôpital des Dames Françaises*, at Nice, and found it much decreased.

He administered brewer's yeast, and after a few days he found the index much increased, while the patient's condition improved. He concludes that brewer's yeast acts in a specific way in staphylococcus infections, in raising the opsonic power of the blood. Bossan also reports the increase of the index in two severe cases of puerperal fever treated by an emulsion of turpentine and artificial serum.

He reports Prof. Fabre's experiments (Lyon) in the same direction as regards the action of turpentine in other streptococcic infections. Fabre took the opsonic index of guinea pigs infected with streptococci and found it to be increased by treatment with hypodermics of a serum in which turpentine is incorporated according to an original formula (*Lyon Médical*, August 6, 1905).

Prior to Fabre, Fauchier, Brennan in England, Fernandès have recommended the use of turpentine in streptococcic infections, chiefly in puerperal fever. Fabre thinks that turpentine acts as a specific against the puerperal streptococci. He injects his turpentine emulsion into the uterus and under the skin.

ORIGINAL REFERENCES TO OPSONISM.

1. An Experimental Investigation of the Role of the Blood Fluids in Connection with Phagocytosis, by A. E. Wright, M. D., F. R. S., and Stewart R. Douglas, M. R. C. S.
 2. *Brit. Med. Journ.*, 1901.
 3. *Brit. Med. Journ.*, Jan. 11, 1902.
 4. *Lancet*, July 5, 1902.
 5. *Journ. of Hygiene*, Vol. I.
 6. Wright and Douglas. Further Observations on the Role of the Blood Fluids in Connection with Phagocytosis—Proceedings of the Royal Society, Vol. LXXIII, p. 129, etc., 1904.
 7. (Wright) Notes on the Treatment of Furunculosis, Sycosis and Acne by the Inoculation of a Staphylococcus Vaccine, and Generally on the Treatment of Localized Bacterial Invasions by Therapeutic Inoculations of the Corresponding Bacterial Vaccines, *Lancet*, Mar. 1902, p. 874; A Lecture on Therapeutic Inoculations of Bacterial Vaccines and Their Practical Exploitation in Treatment of Disease, *Brit. Med. Journ.*, May 9, 1903; On the Treatment of Acne, Furunculosis and Sycosis by Therapeutic Inoculations of Staphylococcus Vaccine, *Brit. Med. Journ.*, May 7, 1904.
- (Wright and Douglas) On the Action Exerted Upon the Staphylococcus pyogenes by Human Blood and on the Elaboration of Protective Elements in Human Organism in Response to Inoculations

of a Staphylococcus Vaccine, Proceedings of the Royal Society, Vol. LXXIV, p. 147, 1904.

(Bulloch) On the Principles Underlying the Treatment of Bacterial Disease by the Inoculation of Corresponding Vaccines, *Practitioner*, Nov., 1905.

8. (Wright) On the General Principles of the Therapeutic Inoculation of Bacterial Vaccines as Applied to the Treatment of Tuberculosis Infection, Transactions of the R. M. C. Society, Vol. LXXXIX, 1906. (Wright and Douglas) On the Action Exerted Upon the Tubercle Bacillus by Human Blood Fluid and on the Elaboration of Protective Elements in the Human Organism in Response to Inoculations of Tubercle Vaccine, Proc. Royal Soc., Vol. LXXIV, pp. 159-180, and *Lancet*, Oct. 22, 1904.

(Wright and Reid) On the Determination of the Presence or Absence of Tubercular Infection by the Examination of the Patient's Blood and Tissue Fluids, Proc. Royal Society, 1906.

(Bulloch) The Treatment of Tuberculosis by Tuberculin, Transactions of the Royal Med. Chir. Soc., Vol. LXXXIX, 1906, pp. 69-84.

(David Lawson and Ian Struthers Stewart) A Study of Some Points in Relation to the Administration of Tuberculin T. R., Controlled By Observation of the Opsonic Index in Pulmonary Tuberculosis, Transactions of the Royal Med. Chir. Soc., 1906, Vol. LXXXIX, pp. 45-68.

Department of Nervous and Mental Diseases.

In charge of Dr. P. E. Archinard and Dr. Roy M. Van Wart, New Orleans.

HERPETIC INFLAMMATIONS OF THE GENICULATE GANGLION.—A new syndrome and its complications. Hunt (*Jour. Nervous and Mental Disease*, February, 1907) calls attention to this condition. After considering the skin areas supplied by the fifth cranial nerve and the cervical plexus he shows that there is an area corresponding to "the interior of the auricle and the external auditory canal in which sensation is preserved," after destruction of these nerves. This area he considers to be supplied by the geniculate ganglion. The disease of this ganglion are herpes auricularis, of which he distinguishes three types, and neuralgic affections. The three types of herpes auricularis are herpes of the auricle, herpes auricularis with facial palsy, and herpes auricularis with facial palsy and auditory symptoms.

The first type has been previously recognized, and except for its distribution differs in no way from herpes elsewhere. It may be complicated with herpes from involvement of the cervical ganglia or Gasserian ganglion. Herpes auricularis with facial palsy he considers due to pressure of the swollen ganglion or direct

extension of the inflammation to the facial nerve. The paralysis usually appears on the third day, and recovery is rapid, three weeks to a month.

The third type is the most severe and presents in the mild cases, in addition to the above, tinnitus aurium and progressive diminution in hearing, in the severe vertigo-nausea, vomiting, nystagmus, and disturbances of the equilibrium. He reports a case of the second type, with autopsy, and makes a preliminary note on the neuralgic affections.

Louisiana State Medical Society Notes.

In Charge of Dr. P. L. THIBAUT, Secretary, 141 Elk Place.

NEXT MEETING: NEW ORLEANS, MAY 14, 15, 16, 1907.

OFFICERS—President, Dr. Henry Dickson Bruns, New Orleans; First Vice-President, Dr. Charles McVea, Baton Rouge; Second Vice-President, Dr. George F. Wilson, Bienville; Third Vice-President, Dr. A. J. Perkins, Lake Charles; Secretary, Dr. P. L. Thibaut, New Orleans; Treasurer, Dr. Jules Lazard, 830 Canal Street, New Orleans.

COUNCILLORS—Chairman, Dr. E. J. Graner, 2d Cong. Dist., New Orleans; Secretary, Dr. J. L. Scales, 4th Cong. Dist., Alden Bridge, La.; Dr. P. E. Archinard, 1st Cong. Dist., New Orleans; Dr. J. Wofford Sanders, 3d Cong. Dist., New Iberia, La.; Dr. S. L. White, 5th Cong. Dist., Ruston, La.; Dr. C. M. Sitman, 6th Cong. Dist., Greensburg, La.; Dr. C. A. Gardiner, 7th Cong. Dist., Sunset, La.

PRELIMINARY PROGRAM.

(A *complete* Program will be published in the May issue of the JOURNAL.)

GENERAL MEDICINE—*Chairman*: Dr. J. C. Willis, Shreveport.
Subject: "*Diseases of the Heart.*"

To open discussion: Dr. J. B. Elliott, Jr., New Orleans.

SANITARY SCIENCE AND QUARANTINE—*Chairman*: Dr. J. N. Thomas, Quarantine.

Subject: (To be announced later).

MARITIME AND INLAND SANITATION (Sub-section)—*Chairman*: Dr. Quitman Kohnke, Covington.

Subject: (To be announced later).

X-RAY AND ELECTRO-THERAPEUTICS—*Chairman*: Dr. N. F. Thiberge, New Orleans.

Subject: "*Electricity as a Factor in Diagnosis and Treatment.*"

To open discussion: Drs. Gustav Keitz and Amédée Granger, New Orleans.

DISEASES OF CHILDREN—Chairman: Dr. J. S. Stephens, Jr., Natchitoches.

Subject: "*The Prevention and Treatment of Spasmodic Croup.*"

To open discussion: Drs. Arthur Nolte, New Orleans, and Z. T. Gallion, Natchitoches.

ORAL SURGERY—Chairman: Dr. L. D. Archinard, New Orleans.

Subject: (To be announced later).

MATERIA MEDICA AND THERAPEUTICS—Chairman: Dr. C. J. Gremillion, Alexandria.

Subject: "*The Hypodermic Treatment of Syphilis.*"

To open discussion: Drs. T. S. Dabney, New Orleans, and J. L. Wilson, Alexandria.

SURGERY—Chairman: Dr. E. Dunbar Newell, St. Joseph.

Subject: "*What Class of Surgery Should the Country Doctor Do, and What Class Can He Afford to Neglect?*"

To open discussion: Drs. E. Denegre Martin, New Orleans, and T. E. Schumpert, Shreveport.

NEUROLOGY—Chairman: Dr. Roy M. Van Wart, New Orleans.

Subject: "*Peripheral Nerve Injuries; Their Prognosis and Treatment.*"

GENITO-URINARY DISEASES—Chairman: Dr. Charles Chas-saignac, New Orleans.

Subject: "*Is Sexual Continence Compatible with Health?*"

To open discussion: Drs. Jules Lazard and Joseph Hume, New Orleans.

OTOLOGY—Chairman: Dr. J. P. Leake, New Orleans.

Subject: (To be announced later).

OBSTETRICS AND GYNECOLOGY—Chairman: Dr. R. W. Faulk, Monroe.

Subject: (To be announced later).

To open discussion: Drs. S. M. D. Clark, New Orleans, and R. W. O'Donnell, Monroe.

BACTERIOLOGY—Chairman: Dr. J. D. Weis, New Orleans.

Subject: *"A Practical View of Bacteriology for the Physician."*

To open discussion: Dr. F. H. Watson, New Orleans.

ANATOMY AND PHYSIOLOGY—Chairman: Dr. Wm. M. Perkins, New Orleans.

Subject: *"On the Permanent Preservation of Anatomic Dissections, with Color of Muscles and Vessels."*

To open discussion: Drs. Edmond Souchon and Marion Souchon, New Orleans.

Note—This section will be represented by a very interesting exhibit of anatomical dissections preserved in natural colors, by the method recently elaborated by Prof. Edmond Souchon, who will address the Society in regard to the exhibit.

MEDICAL JURISPRUDENCE—Chairman: Dr. E. M. Hummel, Jackson.

Subject: *"The Medico-Legal Aspects of Insanity."*

To open discussion: Dr. L. L. Cazenavette, New Orleans.

DERMATOLOGY—Chairman: Dr. Ralph Hopkins, New Orleans.

Subject: *"The Diagnosis of Leprosy."*

TITLES OF PAPERS FOR 1907 MEETING.

(Members of the Society desiring to read papers at the coming meeting are requested to send their titles to this office not later than April 19, at twelve o'clock Noon. After that date it will be too late to insert titles in the official program.)

"The Present Status of the Question of Uterine Carcinoma, with Especial Reference to Its Early Diagnosis and Radical Treatment," by Dr. S. M. D. Clark, New Orleans.

"The Management of Abortion," by Dr. R. W. O'Donnell, Monroe, La.

"Further Report on the Treatment of Malignant Growths by the Massey Method of Electrical Sterilization," by Dr. Amédée Granger, New Orleans.

"Removal of Hemorrhoids by the Angiotribe Method," by Dr. S. P. Delaup, New Orleans.

"Arterial Varix of the Femoral Vessels, Operated on by the Matas-Bickham Method," by Dr. H. B. Gessner.

"Charlatanism," by Dr. L. Lazaro, Washington, La.

"Anatomical Observations and Anomalies," by Dr. Henry Bayon, New Orleans.

"Syphilis; with Notes on Symptomatology and Treatment," by Dr. L. G. LeBeuf.

"Heart Diseases in the Negro," by Dr. J. K. Sheppard, Sligo, La.

"Secondary Mitral Stenosis," by Dr. W. B. Pierce, Lake Providence, La.

"The Effect of Cigarette Smoking on the Heart of the Young," by Dr. John C. Calhoun, Mansfield, La.

"The Diagnosis of the Diseases of the Heart," by Dr. S. L. White, Ruston, La.

"Chronic Diseases of the Heart," by Dr. J. B. Elliott, Jr., New Orleans.

"The Treatment of Pneumonia, Especially in Children," by Dr. John L. Scales, Alden Bridge, La.

"Malarial Hemorrhagic Fever," by Dr. O. M. Patterson, Bastrop, La.

"Diphtheria," by Dr. J. E. Knighton, Homer, La.

COMMITTEE ON ARRANGEMENT.

Dr. John J. Archinard, Chairman of the Committee on Arrangement, wishes to announce the following Chairmen of Sub-Committees:

Registration: Dr. Amédée Granger.

Exhibits: Dr. W. H. Seeman.

Advertisements: Dr. C. P. Holderith.

Banquet: Dr. Homer Dupuy.

These gentlemen have all been very hard at work and promise a successful meeting and a good time for everybody. The details of their various functions are not completed, but will be announced in full by the Chairman in the near future.

ELECTION OF OFFICERS.

EAST BATON ROUGE PARISH MEDICAL SOCIETY. This Society met at Baton Rouge March 13, 1907, and elected the following officers:

President, Dr. C. D. Simmons; Vice-President, Dr. J. A. Caruthers; Secretary and Treasurer, Dr. J. E. Heidingsfelder.

An entertainment tax of \$3.00, payable yearly, was levied on each member. A few clinical cases were discussed, after which the Society adjourned to a banquet at the Meyer Hotel.

IMPORTANT NOTICE TO PARISH SECRETARIES.

The attention of the Secretary-Treasurers of Parish Societies is earnestly called to the provisions of the By-Laws of the State Society which require that dues for the current year must be in the hands of the Treasurer not later than thirty days prior to the meeting. As the Annual Session this year begins May 14, all dues should be sent not later than April 14. If Parish Secretary-Treasurers will live up to this requirement it will greatly facilitate the work of the Treasurer's office.

Medical News Items.

THE ANNUAL ASSOCIATION FOR THE STUDY AND PREVENTION OF TUBERCULOSIS will hold its third annual meeting at the New Willard Hotel, Washington, D. C., on May 6, 7 and 8. The meeting will be divided into the following sections: Sociological Section, Mr. Paul Kennaday, New York, Chairman; Mr. Christopher Easton, New York, Secretary. Clinical and Climatological Section, Dr. George Dock, Ann Arbor, Chairman; Dr. Joseph Walsh, Philadelphia, Secretary. Pathological and Bacteriological Section, Dr. F. F. Wesbrook, Minneapolis, Chairman. Surgical Section, Dr. W. S. Halsted, Baltimore, Chairman; Dr. Hugh H. Young, Baltimore, Secretary. Section of Tuberculosis in Children, Dr. T. M. Rotch, Boston, Chairman.

THE JOURNAL OF INEBRIETY ANNOUNCES THAT IT HAS COMPLETED ARRANGEMENTS for the absorption of the *Archives of Physiological Therapy* which will hereafter be published as a part of the first named Journal. The purpose of the consolidation aims at developing an interest in the therapeutics of drug and alcoholic addictions.

CONSOLIDATION OF MEDICAL MIRROR WITH MEDICAL ERA. The *Medical Mirror* has recently been acquired by the *Medical Era* and consolidated with it, the new Journal to be known as the *Medical Era*. The April issue will be the first number of the consolidated journals, and will be under the editorial management of Drs. S. C. and Clarence Martin.

CLINICAL COURSES OF LECTURES AT N. Y. SKIN AND CANCER HOSPITAL. The New York Skin and Cancer Hospital announces the annual clinical course of lectures by Dr. L. Duncan Bulkley and Dr. Wm. Seaman Bainbridge. The lectures are free to the medical profession and will be given at the Hospital at 4:15 o'clock every Wednesday, beginning March 27, and ending April 24.

WANT DAIRIES REMOVED. The Orleans Parish Medical Society has placed itself on record as being in favor of the removal of dairies and the enforcement of the dairy ordinance. At a meeting of the Society recently the following resolution was unanimously adopted: "That the Society place itself on record as strongly urging the enforcement of the 'Removal of Dairies' ordinance, and that a copy of this resolution be sent to the City Council and to the press of the city of New Orleans."

PRICE OF QUARANTINE STATIONS. The United States Government recently paid \$100,000.00 for the Louisiana Quarantine Stations, and Federal Quarantine will be established on the first of April. The following doctors have been selected to serve at the different points in Louisiana: Dr. Fred Turney, Rigolets; Lake Charles; Dr. William Wild, Lake Borgne. No action has been yet taken on the appointment to Port Eads, but it is understood that Dr. Gill will be sent there. These appointments will go into effect on April 1, 1907. Dr. McClellan will continue to be at the Atchafalaya station.

TUBERCULOSIS SANITARIUM TO BE ERECTED IN ST. TAMMANY. At the last meeting of the Anti-Tuberculosis League's central body the announcement was made that \$1,000.00 had been donated for erecting a tuberculosis sanitarium in St. Tammany Parish.

CHARITY HOSPITAL TO PURCHASE FURTHER PROPERTIES. At a recent meeting of the Board of Administrators of the Charity Hospital a report was adopted and a committee authorized to buy convenient property for the further enlargement of the engineer and laundry departments of the Charity Hospital.

PSI OMEGA DENTAL FRATERNITY BANQUET. The annual smoker and banquet of the Psi Omega Dental Fraternity took place on March 20, 1907, and a number of the Alumni and active Chapters were present. This was the fifteenth anniversary of the order and an appropriate celebration was arranged. The Psi Omega Dental Fraternity is one of the strongest orders of its kind in the United States and is represented in every reputable dental college in the country. Beta Epsilon Chapter, the local chapter, of which Dr. O. J. Reiss is the founder, is four years old and has enjoyed prosperity since its organization.

THE MISSISSIPPI STATE ANTITUBERCULOSIS LEAGUE will meet in Meridian May 8 to 10. The good that can be done by such an organization cannot be overestimated and it is earnestly hoped that there will be a large attendance. Mississippi has been somewhat slow in taking up the "antituberculosis crusade," and is suffering the consequences although not sufficiently wide awake to realize it. Dr. S. B. Flynt, Meridian, is the president, and Dr. F. L. Walton, Meridian, the secretary.

WHAT A MEDICAL SOCIETY SHOULD BE. Dr. Joseph Decatur Bryant, ex-president of the Medical Society of the State of New York, but president-elect of the American Medical Association, is apparently opposed to boss rule in medical organizations. In the course of his presidential address, delivered at the recent meeting of the State Society, he remarked: "It [the State organization] is a free government in the complete sense of the expression, one in which the humblest members of the most cheerless stations of the State have equal privileges with those of exalted station in the midst of wealth and power; one in which the officers are your servants and not your masters, unless *you* so will it to be, and from whom you have the right to demand at the proper time, and in a suitable manner, a com-

plete accounting of the status of their respective stewardships, and which, when wisely required, they have no right to decline. And in all other respects, your rights and privileges cannot be overshadowed by those of another unless you, yourselves, lend aid to the eclipse."—Exc.

THE CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS. will hold its seventh tri-annual session at Washington, D. C., on May 7, 8 and 9, 1907. All physicians are invited to attend the meetings of the Congress, which will be held in the convention hall of the Arlington Hotel, at which place programs and other information may be had.

SOUTHERN STATE SOCIETY MEETINGS. The Medical Association of the State of Alabama will hold its annual meeting at Mobile on April 16, 1907. Dr. J. N. Baker, Secretary, Montgomery, Ala.

The Mississippi State Medical Association will hold its annual meeting at Gulfport on April 10, 11 and 12, 1907. Dr. L. T. Fox, Secretary.

The Louisiana State Medical Society will hold its annual meeting at New Orleans on May 13, 14 and 16, 1907. Dr. P. L. Thibaut, Secretary.

STATE BOARD OF MEDICAL EXAMINERS NEXT MEETING. The next meeting of the State Board of Medical Examiners will take place on May 9 and 10, 1907.

NEW INTERNE STAFF FOR CHARITY HOSPITAL. In the recent competitive examination to fill the vacancies created by the outgoing senior class of resident students, or ambulance surgeons, of the Charity Hospital, the following six students attained the highest average: Wm. W. Leake, S. M. Blacksher, W. D. Phillips, H. W. Kostmayer, H. P. St. Martin and E. E. Lafferty.

ANNUAL MEETING OF THE LOUISIANA STATE GRADUATE NURSES' ASSOCIATION. At the annual meeting of this association, held last month at the New Orleans College of Dentistry, the following officers were elected: Miss C. Fromherz, President; Miss M. Seddon, First Vice-President; Miss S. Lawrence,

Second Vice-President; Miss O. Norman, Secretary; Miss K. Dent, Treasurer. Twelve new members were admitted.

ASSIGNMENTS BY U. S. P. H. & M. H. S. FOR SUPERVISION OF FRUIT TRADE. In connection with the supervision of the fruit trade by the Public Health and Marine Hospital Service, Dr. Wyman has made the assignment of his various assistant surgeons who are to carry on this work. Those surgeons who are now stationed in New Orleans have been given assignments as follows: Drs. T. B. L. Layton, Bluefields, Nicaragua; L. A. Wailes, Livingston, Guatemala; R. P. Ames, Port Cortez, Honduras; W. B. Robertson, Belize, British Honduras. From Mobile Dr. J. F. Harrison goes to Progreso, Mexico, and Dr. D. W. Goodman to Port Limon, Costa Rico. Others assigned to foreign ports are. Drs. Paul Osterhout, Bocas del Toro, Panama; C. K. Roe, Tela, Honduras, and C. V. Reynolds, Ceiba, Honduras.

Dr. J. H. White has been specially appointed to take entire charge of this service, both in the tropics and at quarantine stations along the Gulf of Mexico.

Dr. Henry Goldthwaite, of Mobile, was appointed an Acting Assistant Surgeon, effective from date of oath, March 8, 1907.

MARRIED: Dr. J. J. Harlan and Miss Jennie Polk, at Alexandria, La., on the first of March. The groom is well known to the medical fraternity of Alabama, having been one of the old councillors of the Alabama State Medical Society.

PERSONALS: Dr. E. M. Hummel, who has been assistant physician at the Jackson Insane Asylum, has resigned the position.

Dr. E. F. Bacon is acting assistant coroner during Dr. Mioton's absence.

Dr. S. F. Mioton, who has been doing post graduate work at the New Orleans Polyclinic, is now pursuing his studies in Philadelphia.

Dr. J. E. Pierce has moved from Isabel to Bogalusa, La.

THE TEXAS SANITARIUM FOR TUBERCULOSIS, located at Llano, Texas, announces that Dr. T. O. Maxwell, former superintendent of the Southwestern Insane Asylum at San Antonio, has pur-

chased an interest in the Sanitarium. He is a member of the board of directors and Medical Director of that institution and has taken charge of same. Dr. Maxwell is an experienced institutional man, and giving his personal attention to this place should insure its success.

Book Reviews and Notices.

All new publications sent to the JOURNAL will be appreciated and will invariably be promptly acknowledged under the heading of "Publications Received." While it will be the aim of the JOURNAL to review as many of the works received as possible, the editors will be guided by the space available and the merit of the respective publications. The acceptance of a book implies no obligation to review.

The Practice of Pediatrics, In Original Contributions by American and English Authors. Edited by WALTER LESTER CARR, A. M. M. D. Lea Bros. & Co., Philadelphia and New York, 1906.

Lea Bros. & Co. conceived the idea of publishing three companion volumes, covering respectively Gynecology, Obstetrics and Pediatrics, each to be a compact presentation of the world's best knowledge in these departments. All three volumes have been issued, and it may be said that the aim of the publishers has been accomplished. This volume, edited by Dr. Carr, contains 1,000 pages of splendid illustrations and contributions from fourteen well known authors of America and England. The first point of interest noted is the arrangement of the text. It is divided into twelve sections, each covering from one to five chapters, e. g., the first section, Diseases and Injuries of the New Born, is written by Dr. Edw. P. Davis, and covers the chapters on the normal infant, the premature infant, asphyxia neonatorum, accidents to the umbilical cord, injury at birth and infections.

Throughout the work this systematic grouping is followed, and adds to the convenience of the reader.

A list of the contributors will give further proof of the excellence of the book.

Besides Dr. Walter Lester Carr, the editor, the following names appear: Drs. Isaac A. Abt, David Bovaird, Jr., Floyd M. Crandall, Chas. Townshend Dade, Edw. P. Davis, Chas. Godwin Jennings, Daniel McCarthy, Matthias Nicoll Jr., John F. Paynton, F. R. C. P., Clive Riviere, M. R. C. P., Jno. Ruhräh, Thos. S. Southworth, Geo. M. Tuttle and Leroy M. Yale.

It is impossible to go into details; it is enough to say that the work will be promptly accepted as a standard, because of its convenient arrangement, excellent contributions, and high class work of the publishers.

MILLER.

Diseases of the Nervous System Resulting from Accident and Injury, by PIERCE BAILEY, A. M., M. D. D. Appleton & Company, New York and London, 1906.

The increasing number of personal damage suits against corporations where some injury to the nervous system is involved, and for which compensation is claimed, render a knowledge of this subject of importance to the practitioner as well as the specialist. This book, while written from the standpoint of a neurologist, and is a recasting of a former work by the same writer, the examination of a patient is fully discussed and the relationship of the various diseases to injury considered, special attention is given to the conditions now known as traumatic neuroses and their medico-legal relations and treatment receive considerable space. It can be recommended to those desirous of informing themselves on these subjects.

VAN WART

The Management of a Nerve Patient, by ALFRED T. SCHOFIELD, M. D. P. Blakiston's Son & Co., Philadelphia, 1906.

The importance of psychotherapeutics in medicine has of late received considerable attention. The writer of the present volume has written extensively on this subject, and while the present volume contains little that is new, there is much with which many are not familiar.

VAN WART.

Tumors of the Cerebellum. A. R. Elliott Publishing Company, New York.

This volume is a reprint of articles by Bulls, Frazier, de Schweinitz, Weisenburg and Ludholtz, which appeared in the *New York Medical Journal*. The papers deal with medical and surgical aspects of cerebellar tumors, and give a good resume of our present knowledge of this subject.

VAN WART.

The Thyroid and Parathyroid Glands, by HUBERT RICHARDSON, M. D. P. Blakiston's Son & Co., Philadelphia.

This work deals with the anatomy, physiology of the thyroid and parathyroid glands and the diseases usually considered as resulting from disturbances of these glands. While the work is rather uneven, it contains much valuable information.

VAN WART.

Neurotic Disorders of Childhood, by B. K. RACHFORD, M. D. E. B. Treat & Co., New York.

This book is a revision of papers of the writer's previously published in various journals. Some additional chapters have been added. It deals with subjects of great interest to the practitioner, and while some of the writer's views might be criticized the work is worth reading.

VAN WART.

The Practical Medicine Series for 1906. Physiology, Pathology, Bacteriology. Volume IV. Edited by GUSTAVUS P. HEAD, M. D. The Year Book Publishers. Chicago, 1906.

The important articles dealing with Anatomy, Physiology, Pathology and Bacteriology for the previous year are abstracted. The work should prove of value to those interested in these subjects.

A Primer of Psychology and Mental Disease. F. A. Davis Company, Philadelphia, 1906.

This book, though intended for nurses, devotes 133 of 182 pages to a consideration of psychology and descriptions of the various forms of insanity. The classification of Kræpelin is followed. The remainder, some fifty pages, is devoted to care of insane cases, and contains many practical suggestions. VAN WART.

Tumors of the Cerebrum, Their Focal Diagnostic and Surgical Treatment, by MILLS, FRAZIER, SPILLER. DE SCHWEINITZ and WEISENBURG. Edward Pennock, Philadelphia.

This is a reprint of articles which have appeared in various journals dealing with cerebral tumors. The articles by Mills dealing with the localization of these tumors are especially noteworthy. Frazier deals with the surgical aspects, and an article by De Schweinitz considers the ocular symptoms. VAN WART.

Organic and Functional Nervous Diseases, by M. ALLEN STARR, M. D., Ph. D., LL. D., Sc. D. Lea Brothers & Co., New York and Philadelphia, 1907.

The interest manifested in the study of diseases of the nervous system has led to a great increase in the number of text-books. Too frequently little originality is shown in the choosing of the subject matter or in the presentation. This criticism can not be offered of the present work. It is well arranged, the subject matter well chosen, and the book fairly evenly balanced, with perhaps the exception of the section devoted to the functional diseases, which is rather brief in comparison with the other parts of the book. This did not appear in the first edition, and has been added for completeness. As it represents the experience of a neurologist with great clinical facilities the work will prove of value to those interested in nervous diseases. The practitioner will find it a work of great use in gaining an insight unto this branch of medicine. VAN WART.

Baby Incubators, A Clinical Study of the Premature Infant, with Especial Reference to Incubator Institutions Conducted for Those Purposes, by JOHN ZAHORSKY. A. B. M. D. Courier of Medicine Co., 1905.

This book of 136 pages grew out of a series of articles describing the author's experience with premature infants reared in an institution conducted for show purposes at the La. Purchase Exposition. A detailed record is given of the children who were on exhibition, and a practical outline for the management of premature infants is given. Any one interested in this subject will find Dr. Zahorsky's little volume quite profitable. MILLER

Manual de Practica Sanitaria. BARNET. Havana, 1905.

This book is intended only to propagate sanitation. It is simply a practical book on hygiene, and the fact that it appears in Spanish will help extending education on hygiene among a large portion of Spanish speaking people, so few are the recent works on hygiene in that tongue. It is edited by the Board of Health to serve as a guide to doctors, func-

tionaries and the public as well. It teaches how through compulsory declaration a large number of diseases can be checked and disasters avoided. The motto of the Board of Health of Cuba is suggestive "Salus populi suprema lex."

With a man like Dr. Carlos Finlay at its head, the "Sanidad of the Cuban Republic" will accomplish its mission. E. M. D.

Pulmonary Tuberculosis. A. P. FRANCINE, M. D.. J. B. Lippincott Company.

This handsome book treats of the modern and specialized treatment of pulmonary tuberculosis. It gives a brief account of the methods of study and treatment at the Henry Phipps Institute of Philadelphia. Its author is of the staff of this admirable Institute. The illustrations are to the point, strikingly instructive. The print is neat and large, to the taste and delight of the average reader.

The book will bring, besides most valuable information, a good deal of encouragement to all, as the first days of enthusiasm over the modern treatment of pulmonary tuberculosis are gone by, leaving much bitterness in the heart of so many. Why? It takes a special knowledge, training and temperament to treat tuberculosis; in other words it is far from being a cheap and easy task, and it is no wonder that so many failed.

The fact remains that tuberculosis can be cured in many, and prevented to a great extent, and with this ideal in view we should give our support to those who devote their lives to this special work. E. M. D.

Progressive Medicine. HARE—LANDIS, Dec. 1, 1906. No. 4. Lea Bros.

We note in this volume a review of the latest advance in diseases of the digestive tract and allied organs: liver, pancreas and peritoneum—anaesthetics, fractures, dislocations, amputations, surgery of the extremities, and orthopedics—Genito-urinary diseases, Diseases of the Kidneys.

This volume contains the usual annual review of advance in materia medica which is so valuable and so distinctly appreciated by the majority of the practitioners. E. M. D.

Practical Medicine Series. General Medicine. Vol. VI. BILLINGS-SALISBURY. Year Book Publishing Co.

This volume VI of the 1906 Practical Medicine Series, comprising ten volumes on the year's progress in medicine and surgery, under the general editorial charge of Gustavus P. Head, M. D., reviews the most salient articles contributed to General Medicine during last year.

This series is published primarily for the general practitioner, but the arrangement in several volumes, enables those interested in special subjects to buy only the parts they desire. E. M. D.

Conservative Gynecology and Electro-Therapeutics, A Practical Treatise on the Diseases of Women and Their Treatment by Electricity, by G. BELTON MASSEY, M. D. Fourth Edition. F. A. Davis Co., Philadelphia.

Probably no author is better known in this field of therapeutics than Dr. Massey. This volume, the fourth edition, is enlarged to include the

later advances in electric apparatus and their application in the various diseases of women. The work is fully illustrated, containing many chromo-lithographs and full page half-tone plates, and the essential details of treatment are related to the fullest extent.

The chapter on Roentgen Rays in Diagnosis and Therapeutics is written by Dr. Herman Grad, of New York City, and may be considered a thorough review of the subject. There is one portion of the work, however, that seems to have escaped the attention of the author during the revision, viz., the indications and treatment of fibroids of the uterus.

The results obtained from prolonged treatment by electricity are certainly not to be compared to those derived from surgical treatment as carried out at present.

The work as a whole is up to date, with the exception of the chapter mentioned, and no doubt this new edition will meet with the favor accorded former editions.

MILLER.

Text-Book of Genito-Urinary Diseases, by DR. LEOPOLD CASPAR. Translated by CHARLES W. BONNEY, B. L., M. D. P. Blakiston's Son & Co., Philadelphia, 1906.

One of the very best texts on the subject, it is a fortunate thing that it has been placed at the command of English speaking readers. The diction is simple, the system good, the illustrations numerous and selected for their practical utility. Besides, we have the experience of Caspar given with the authority of a master. Dr. Bonney has done well his work as translator, and has furnished valuable annotations and additions.

The book is to be sincerely commended and also heartily recommended to our readers.

C. C.

Studies in the Psychology of Sex. Sexual Selection in Man. By HAVELOCK ELLIS. F. A. Davis Co., Philadelphia.

This volume of the series by the noted English psychologist deals with the external sensory stimuli affecting sexual selection in man. It shows the part that touch, smell, hearing and vision play as stimuli to tumescence and in the direction of sexual choice. It is interesting as well as instructive and, while men of experience know a great deal in a practical way of the subjects treated, yet they are handled in a scientific manner which adds value to the knowledge imparted or reviewed, as the case may be.

C. C.

Practical Medicine Series. Vols. VIII and X. The Year Book Publishers, Chicago, 1906.

These two volumes include *Materia Medica and Therapeutics*, *Preventive Medicine*, *Climatology*, *Forensic Medicine*, *Skin and Venereal Diseases*, *Nervous and Mental Diseases*, each subject being edited by one qualified through his particular attachment to the branch discussed. This series fulfills a valuable purpose which is exactly covered by no other work. The editor of the individual subject concisely but comprehensively reviews the year's progress, the material for his work being derived from all sources, periodicals, text-books and brochures. The scope of the work forbids a critical review of the individual subjects, but the wholesale commendation of the method employed, and the mention of the names of the editors should be enough to encourage the practitioner to investigate for himself. These editors are to mention: Drs. George F. Butler, Henry B. Favill, Norman Bridge, Daniel R. Brower, Harold N. Moyer, Wm. L. Baum, Hugh T. Patrick and Wm. Healy.

DYER.

Natural Laws of Sexual Life, by ANTON MYSTROM, M. D. Authorized translation from the third Swedish edition by CARL SANDZEN, A. M., M. D., Ph. D. The Burton Co., Kansas City, 1906.

The translator prefaces his work by commenting upon the constant demand for the work in hand in other countries than those speaking the English language. The work itself must appeal to the student of psychic medicine, especially as relating to sex. It reviews the integral moral sense, the marriage instinct, and incidentally treats of the gradual elevation of the moral and physical appreciation of sex in the human being. Altogether the work commends itself as an interesting study of the question without in any way aiming to be exhaustive or too authoritative.

DYER.

The Practitioners' Medical Dictionary, by GEORGE M. GOULD, A. M., M. D. P. Blakiston's Son & Co., Philadelphia, 1907.

Dr. Gould has contributed severally to the lexicography of medicine during the past few years, and the present volume shows a careful review of his previous work with the idea of making the definitions clear, the etymology exact, and the words themselves complete so far as the modern employment of the same is concerned. Each of these elements of revision argues the value of the work.

DYER.

Lea's Series of Pocket Text-Books—Diseases of Children, by GEORGE M. TUTTLE, M. D., 2d Edition. Lea Bros. & Co., Philadelphia, 1907.

This handbook deserves the favorable notice which it has generally received. Its chief merit consists in its concise presentation under clear captions of the affections of childhood. Illustrations are few but carefully prepared, and no attempt has been made at making the work exhaustive, its scope being limited to the purposes of a handbook.

DYER.

Publications Received.

LEA BROS. & CO., New York and Philadelphia, 1907.

Essentials of Obstetrics, by Charles Jewett, A. M., M. D., 3d Edition.
Thornton's Pocket Medical Formulary.

D. APPLETON & CO., New York and London, 1907.

Diseases of the Lungs, by Robert H. Babcock, M. D.

J. B. LIPPINCOTT CO., Philadelphia and London, 1907.

A Study of the Human Blood Vessels In Health and Disease, by A. V. Meigs, M. D.

F. A. DAVIS CO., Philadelphia, 1907.

Text-Book of Psychiatry, by Dr. E. Mendel. Authorized Translation Edited and Enlarged by Dr. Wm. C. Krauss.

WM. T. KEENER & CO., Chicago, 1906.

The New Hygiene, by Elie Metchnikoff, M. D.

MORTUARY REPORT OF NEW ORLEANS.

(Computed from the Monthly Report of the Board of Health of the City of New Orleans.)

FOR FEBRUARY, 1907.

CAUSE.	White.	Colored.	Total.
Typhoid Fever.....	10	4	14
Intermittent Fever (Malarial Cachexia)	1		1
Smallpox.....		1	1
Measles	9	1	10
Scarlet Fever.....	1		1
Whooping Cough.....	4		4
Diphtheria and Croup.....	4		4
Influenza	47	17	64
Cholera Nostras.....			
Pyemia and Septicemia	1	2	3
Tuberculosis.....	57	55	112
Cancer.....	11	5	16
Rheumatism and Gout	1	2	3
Diabetes	1		1
Alcoholism	2		2
Encephalitis and Meningitis.....	8	2	10
Locomotor Ataxia.....	3		3
Congestion, Hemorrhage and Softening of Brain.....	16	10	26
Paralysis			
Convulsions of Infants	2	1	3
Other Diseases of Infancy	13	7	20
Tetanus.....	2	5	7
Other Nervous Diseases			
Heart Diseases.....	58	29	87
Bronchitis	13	7	20
Pneumonia and Broncho-Pneumonia.....	46	42	88
Other Respiratory Diseases.....	13	1	14
Ulcer of Stomach.....			
Other Diseases of the Stomach	3		3
Diarrhea, Dysentery and Enteritis.....	17	5	22
Hernia, Intestinal Obstruction.....	3	3	6
Cirrhosis of Liver.....	12	3	15
Other Diseases of the Liver	2	1	3
Simple Peritonitis	4	1	5
Appendicitis.....	1		1
Bright's Disease	31	8	39
Other Genito-Urinary Diseases.....	5	3	8
Puerperal Diseases	4	5	9
Senile Debility.....	32	15	47
Suicide	1		1
Injuries.....	17	14	31
All Other Causes.....	12	12	24
TOTAL.....	467	261	728

Still-born Children—White, 17; colored, 14; total, 31

Population of City (estimated)—White, 251,000; colored, 90,000; total, 341,000.

Death Rate per 1000 per annum for Month—White, 23.32; colored, 34.80; total, 25.62.

METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmospheric pressure 30.11
Mean temperature 60.
Total precipitation447 inches.
Prevailing direction of wind, north.

New Orleans Medical and Surgical Journal.

VOL. LX.

MAY, 1907.

No. 11

Original Articles.

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. A complimentary edition of one hundred reprints of his article will be furnished each contributor should he so desire. Covers for same, or any number of reprints, may be had at reasonable rates if a **WRITTEN** order for the same accompany the paper.)

An American School of Tropical Medicine. Shall There Be One? Where Shall It Be Located? What Shall Be Its Organization?

By ISAAC W. BREWER, M. D.

Fort Huachuca, Arizona.

About fifteen years ago a distinguished officer of the Medical Department of the Army, a professor of the Army Medical School, said, that as we had no tropical possessions, and would in all probability have none, it was a waste of time for candidates for the army to study the diseases peculiar to the tropics. At that time no one could foresee that we would within a few years be the rulers of more than six millions of Malays, and that our interests in the tropics would extend from the West Indies to Asia. Not only have we entered the tropics as a colonial power, but we are endeavoring to become the commercial power in tropical America. Of the many problems that confront the white race in the

warmer portions of the globe, none is equal to the sanitary problem. Inability to master it was one of the causes of the failure of the French on the Isthmus of Panama, and tropical diseases have frequently reduced many a splendid army to a condition of impotence.

If we are to become a power in the tropics we must meet the sanitary problem boldly and solve it, or we will fail. To do this we must have men trained in tropical medicine and hygiene, but there is no place in America where the student can obtain such training.

The great colonial nations of Europe, awakening to the need of such instruction, have established schools of tropical medicine, and in addition have sent many of their best men to study the diseases of warm countries.

Some of the best work in prevention of tropical diseases has been done by Americans. We should be especially proud of the labors of the Army Yellow Fever Commission, and the application of the knowledge gained by them, by Colonel Gorgas in Havana and on the Isthmus of Panama. The work of Ashford and King, in Porto Rico, is probably one of the greatest feats in preventive medicine, while in Manila the laboratory under Strong is doing good work.

Good as this work has been it has not produced the greatest possible results because these masters of tropical medicine have not been brought in contact with the students of medical science of to-day who are to replace them in the great work of conquering the tropics. The student has thereby lost what is probably the greatest of the endowments of his college course, the inspiration that comes from intercourse with the master mind.

There are a sufficient number of American physicians working in the torrid zone to warrant a school of Tropical Medicine. On the Isthmus of Panama we employ nearly a hundred physicians, in the Philippine service there are thirty-eight American physicians, and the majority of the younger men of the medical corps of the Navy and Army are destined to spend a large portion of their service in the tropics. There are also many American physicians scattered throughout tropical America, in the employ of mining and other companies. These men would welcome such a school, as it would afford a chance to keep up with the best work in all

portions of the world. To the business man who has interests in the torrid zone it will appeal because it will enable him to obtain the greatest amount of labor from his employees and will reduce the number who have to be invalided home. The Federal Government should avail itself of such a school to train the officers of the military and naval establishments. The graduates will always be at the service of the government in case of war in a tropical country, and such a body of trained experts would be of the greatest value to the country.

For some time quite a number of American physicians have been going to the London School of Tropical Medicine for instruction in tropical diseases.

We may, therefore, answer the first of our questions by saying that such a school is needed.

Where shall the school be located? It would seem that the best results are to be obtained if the school be located in a large seaport town that has a considerable tropical commerce. It would be well if the surrounding country were able to furnish a supply of such cases as malaria, uncinaria and other parasitic diseases. The facilities of teaching would be greatly improved were there a national quarantine close by where such diseases as yellow fever, plague, and beriberi might be studied.

A number of cities have been mentioned for the seat of this institution of learning. San Francisco puts forth its claim based upon its commercial relations with the Orient, its large oriental population, and the number of tropical cases that are returned from the Philippines. It hardly seems an ideal place for the school. The Philippine cases are mostly soldiers or civilians in the employ of the government. They are largely under supervision during their stay in the tropics, and the number of infections will decrease each year as we understand more about tropical medicine. Few of the civilians invalided home remain in San Francisco, and owing to the climate the time will come when there will be no government hospital of any size in the town. The surrounding country does not furnish much material for the student of tropical medicine. A considerable part of the Oriental population does not come from the tropics, but from portions of China within the temperate zone. The same may be said of a portion of the commerce from the Orient.

Dr. Goodhue, of Honolulu, puts forth the advantages of that city, and there is much to commend it as a location. Situated within the tropics, it has one of the most delightful climates in the world. Of tropical diseases there is no particular shortage, but the islands claim immunity from malaria. This is one of the most important diseases of the tropics, and the practitioner will need to be well posted on that disease before he starts for his post. Therefore it seems unwise to establish the school in a locality that is more than 2,000 miles from a malarious region. Honolulu has the advantage of being remote from the routes of travel, and for those who are to practice in the West Indies and South America it is very much out of the way.

Dr. J. M. Swan, of the Philadelphia Polyclinic, has recently started a laboratory course in tropical medicine. He is well qualified for the work, having spent several months at the London school in preparation. He writes me that there is to be no bedside instruction, and I much doubt if such instruction can be well given in a city so far removed from the tropics.

It would seem that one of the cities of the South Atlantic or Gulf coasts would be the best location.

New Orleans, being the principal medical center of the South, offers many facilities. Her commerce with the tropics is extensive, and from the surrounding country come many cases of malaria, uncinaria and other diseases common to the tropics and subtropics.

For the year ending December 31, 1905, there were treated in the Charity Hospital the following tropical diseases:

Anemia, malarial, splenic	5
Anemia, Pernicious	10
Beriberi	2
Malarial Fever:	
Intermittent	1
Pernicious	5
Quotidian	6
Tertian	305
Remittent	15
Toxemia	27
Cachexia	52
Estivo-autumnal	77
Total malarial	488

Variola	5
Yellow Fever	83
Yellow Fever convalescence	23
Tetanus	19
Dysentery, amebic	3
Dysentery, acute	18
Dysentery, sub-acute	10
Ascaris Lumbricoides	1
Uncinariasis	12
Diarrhea	84

The deaths from tropical diseases in the city during the same period were as follows:

Intermittent fever, malarial cachexia	48
Variola	6
Dysentery	44
Yellow Fever	437
Tetanus	102
Diarrhea and enteritis	99
Intestinal parasites	1
Sunstroke	9

The average number of deaths from malaria during the past twenty-five years has been 267.

Of 182,181 cattle slaughtered during 1905, 3,945 were found to be infected with *Fasciola hepaticum*, 9,256 with *Stephanurus dentatus*, and 1,066 with *Tinea echinococcus*.

At the leper colony at Indian camp there were in the spring of 1906, 44 lepers; no doubt there were more at large in the community.

From the above we see that there is an abundance of material in New Orleans for the study of tropical diseases, and were a hospital established to treat such cases, the clinical material would rapidly increase.

As the work on the Panama Canal progresses New Orleans is bound to become one of the chief ports of embarkation for the isthmus, and the returning workmen and sailors will bring to her doors many cases of tropical disease.

We may, therefore, answer the second question by saying that New Orleans seems to be the best location for the school.

The question of organization is fully answered by Sir Patrick

Manson, in the following quotations from his Lane Lectures for 1905 (page 226):

“Manifestly for such countries as Great Britain and the United States, with vast extending tropical interests, schools in which tropical medicine can be adequately learned are necessary.”

“As a result of this experience, I have arrived at certain conclusions affecting constitution and management (speaking of the London School of Tropical Medicine).

“(a) The school must be in close association with a hospital where tropical cases are plentiful, or can be concentrated.

“(b) The laboratory and class rooms should be so near the ward that the student can have immediate access to any patient whose disease he is engaged in studying.

“(c) The staff should consist of:

(1) A superintendent, demonstrator or tutor, who should have the run of the hospital cases and be director of students as well as general demonstrator. The salary of this officer must be a good and rising one, so as to secure high ability, and also (and this is important) continuity in office.

(2) Assistant demonstrators.

(3) Lecturers, physicians, and surgeons, who themselves have had tropical experience.

“(d) The length of the course of study should be not less than three months, and the entire time of the student must be devoted to the work.

“(e) The certificate of the school should be given only to those who have passed satisfactory examination.

“(f) There should be special chairs in protozoology and helminthology, subjects inadequately taught in the medical schools, but of great importance in tropical medicine.

“(g) There should be a research department, a museum, and a library.

“(h) The school should be open to graduates only.

“(i) To meet the convenience and exigencies of medical men returning from abroad, and this is a practical point of considerable importance, there should be three complete sessions annually.

“(j) The superintendent, the protozoologist, and the helminthologist should give their whole time to the school and to research.”

To the above we should add a chair of tropical hygiene.

The research department should be in close association with the laboratories in Manila, Panama, Porto Rico and other portions of the tropics where our country is interested.

To obtain the best results this department should have sufficient funds to provide for sending commissions to different portions of the tropics to study the various diseases on the spot.

On this subject Ashford, whose experience in the tropics has been extensive, and whose work has attracted the attention of the profession at large, says: "That tropical diseases should be thoroughly studied with a view to preventing and finally extinguishing them it is necessary that thoroughly competent medical officers should give their whole time to the matter, and work out the matter on the spot." "To this end laboratories for original research should be established in the Philippines, with liberal provision for field parties to go into the districts particularly infected, and study the conditions which favor the existence of the disease and which must be remedied to secure their suppression."

That the United States is to become a greater factor in the politics and commerce of the tropical world is a foregone conclusion. Recently the government has sent one of our ablest statesmen to visit the nations of South America bearing them assurances of good will. This was done in order to stimulate trade with those countries. Within the past few months one of the "Great Captains of Industry" has presented to the Bureau of American Republics a handsome sum for a new home. Will not some of our great men of business come forward and endow a school of tropical medicine.

It has been estimated that \$500,000 will amply provide for the school.

The business men of London and Liverpool have found such institutions paying investments. If it pays in England will not it yield a similar return in our country now that we are reaching out to secure the trade with our tropical neighbors?

Louisiana State Medical Society Proceedings.

(EDITED BY PUBLICATION COMMITTEE).
P. L. Thibaut, M. D., Chairman.

MEETING OF 1906.

Section on Diseases of Children.

The paper by DR. L. ABRAMSON on "*Rheumatism in Children*" was read by title and referred to the Committee on Publication. (*Manuscript not furnished to Publication Committee.*)

A Case of Spina Bifida—Operation; Recovery.

By DR. E. D. FENNER.

As far as I know the case I am about to report is the first one operated on at the Charity Hospital, since 1892 at any rate. This is not because there have been no cases seen in the wards during that long period, but because a very considerable proportion of the cases were unsuited for operative relief, and in those which appeared favorable the consent of the parents could not be obtained. Spina bifida is, next to club-foot, the commonest of congenital deformities. It has been described in detail over and over again, so that an account of its varieties may be gotten from any text-book, and there would be no reason to attempt a review of its varieties or classification if it were not for the fact that few of us carry around in our heads the contents of our text-books in orderly arrangement, especially that part which relates to comparatively infrequent structural malformations having their origin in early fetal life. It may therefore be permitted to me to very briefly review the subject.

Ballentyne gives the following classification of Spina Bifida:

1. Total spina bifida; the whole canal is widely open, and there is no sac.

II. Partial spina bifida.

A. Spina bifida occulta.

B. Spina bifida without spinal hernia; the canal is widely open at one or more places, but there is no sac.

C. Spina bifida with spinal hernia (common variety).

1. Meningo-myelocele (common sub-variety).

2. Meningocele.

3. Myelocele.

Total spina bifida has no surgical interest. Such cases are mere pathological curiosities. The same thing is true of partial spina bifida without spinal hernia. The spinal canal is widely open in one or more places and extra-uterine existence is impossible.

Spina bifida occulta is a condition in which there is no tumor to be seen at the site of the defect, but there is very often a peculiar growth of thick hair marking the site of the spinal defect. These cases often survive to adult life, and in many cases the condition is not recognized at all. There is generally connected with these cases some paralytic disorder of the lower extremities, and in later life, as a result of pressure by fibrous bands on the cord, there may occur perforating ulcers of the feet. Other deformities may be associated with the masked spina bifida. Occasionally, as in the case of paralysis or perforating ulcers, operation may be indicated, but in most of these cases no interference is needed.

Spina bifida (partial) with spinal hernia is the common form of the deformity. It is compatible with a more or less prolonged post-natal existence, although from the very nature of the defect it is likely that many of the patients will soon die. It is very often associated with other congenital deformities, such as club-foot, lanky losed joints, and hydrocephalus. Paralysis of the sphincters and the lower extremities is not infrequent. And in these cases operative intervention is not promising.

The hernial protrusion may consist only of the membranes (meningocele), the membranes and the spinal cord (meningo-myelocele), or of the spinal cord with its central canal dilated and filled with fluid (myelocele). Of these the meningo-myelocele is by far the most common, and in 86% of these, according to Moore, the tumor was lumbar, lumbo-sacral or sacral, while Ballantyne estimates the percentage in this location at 77%.

The prognosis of cases of spina bifida when let alone is exceed-

ingly bad. Unless the tumor is covered with good, thick skin, and is small (a state of affairs seldom seen), ulceration, rupture and secondary meningitis occurs sooner or later. If the tumor is large, or the sac is inflamed and ulcerated, or the case is complicated by hydrocephalus or paralysis, there is great danger of death following operation.

In a very admirable paper, to which reference has already been made, which he read before the American Surgical Association in 1905, James E. Moore has analysed 378 cases of spina bifida treated by operation (excision), and reported in literature since 1813. He very properly, in my opinion, excludes 67 articles reporting cases treated by injection of iodine. As he properly remarks, "this operation has been (or should be) abandoned as dangerous and unsurgical." It has always seemed to me that any case which offered a hopeful prognosis from injection should be much more suited to excision, and any case which was not fit for excision could not be a favorable one for injection.

Moore shows that the age at which operation is performed has a decided bearing upon the mortality. Of the 378 cases analysed in his paper, the mortality in those operated upon within the first few months of life was over 35%, while in those operated upon when 4 or 5 years old the mortality was only 4.7%. He goes on to say that, "Of course, this difference can be largely accounted for by the fact that the patients living 4 or 5 years were not bad cases and were good subjects for operation, but it raises the question whether it is really worth while to operate upon these patients early."

Moore quotes the conclusions of a number of prominent surgeons as to when operation should be performed in spina bifida. Thus Bayer would operate under the following conditions: 1. Where there is no decided hydrocephalus. 2. When there is no paralysis. 3. When clinically there are no complications to be expected in the sac.

Hildebrand concludes that most myelocèles and meningo-myelocèles, and cases complicated by irreparable deformities and severe paralysis, should not be operated upon.

Broca concludes that operation is not advisable, after reporting several cases.

Mayo Robson, in 1895, advised operation in all cases except

where the children's tumor is so small that operation is evidently not needed, and where there is a large fissure, marked hydrocephalus, and paralysis.

Moore himself concludes as follows: "A careful study of these reported cases illustrating the experience of so many surgeons seems to justify the following conclusions:

- "1. Operation upon children of very tender age is scarcely worth while, because it is attended by so large a mortality rate, and because it does not stop the progress of progressing cases.
2. Patients five or more years old can be operated upon safely.
3. Patients with large or rapidly growing tumors, with hydrocephalus and with paralysis, or deformities of the extremities, are not cured.

"Finally, all we can hope to accomplish by operation for spina bifida is to relieve the patient of an unsightly and annoying tumor after he has survived the dangers of the affliction *per se*."

It seems to me that these conclusions are too sweeping. Because the mortality of cases operated on in the first few months of life is as high as 35% appears to me insufficient reason to abandon those cases which have a very thin sac wall which will inevitably rupture or slough to certain death provided the case is otherwise suited to excision. Comparatively few cases of spina bifida will survive for five years if left alone. Most cases of spina bifida are meningo-myeloceles, and most meningo-myeloceles have a very thin sac which soon ulcerates and begins to leak. It seems to me, therefore, that where the prognosis is as black as it must be under such circumstances where no interference is attempted, that we are justified in operating, in the absence of hydrocephalus or paralysis, no matter how young the patient may be, provided it seems probable that delay will result in rupture of the sac. I find it difficult to believe that so bold and competent a surgeon as Moore would refuse to do anything for such cases as these simply because the mortality rates are high. The question seems to be not whether the mortality rate is high, but whether it is as high as it would be if nothing were done.

As to the other contra-indications there is no difference of opinion as to the inadvisability of operating on cases with hydrocephalus or paralysis. In regard to the operative technic I have always thought that osteoplastic bone flaps were a waste of time

and of the patient's powers of resistance. If a firm suture of the membranes and of the overlying soft parts will not prevent a return of the hernia, a bone flap will not cure the case. However a child of 5 years may bear the shock of having a flap taken from the iliac crest of sacrum and transplanted to the spinal fissure (and I do not believe it will bear it well), I am quite sure that a young infant will be brought much closer to death's fingers by such a procedure than by a simple excision with suture of the soft parts.

My own experience in the excision of spina bifida is confined to two cases, both very young infants, and both sacro-lumbar meningo-myeloceles. One of them I present to you to-day, the other died several weeks after the operation of acute summer diarrhea and suppression of urine. Both stood the operation well, exhibiting little shock either from the escape of the spinal fluid or from the suture of the sac and soft parts.

Case 1. Was only ten days old when I first saw it. It was a male baby, well nourished, and with no deformity of the feet, and with no evidence of hydrocephalus. In the sacro-lumbar region there was a tumor about the size of a small orange, translucent, marked by the central cicatrix which we expect in meningo-myelocele, and with a sac so thin that it looked as if the slightest carelessness in handling it would result in rupture. I advised that we wait as long as possible before trying to operate, but by the time the child was three weeks old ulceration had commenced and the parents brought the child to the city for me to operate.

Under chloroform anesthesia, and with the assistance of Dr. J. D. Bloom, I made an elliptical incision around the base of the tumor and tried to dissect away the skin before opening the sac, but so delicate were the tissues and so close was the fusion of skin and membranes that in a very short time the sac was penetrated by the knife and the spinal fluid escaped. Finding it impossible to restrain the fluid I slit up the sac without any further delay. Very little shock was caused by the escape of the fluid. The cauda equina was adherent to the sac wall and had to be dissected free, a number of nerve fibres being sacrificed in the process. The opening into the canal was quite large, involving at least three of the arches, and the skin and membranes were so densely adherent together that I simply sutured the edges of the cleft together with three rows of catgut sutures, after replacing the cauda equina in the canal.

The baby went back to bed in excellent condition, but a few hours later it had a rise of temperature to 103 F., and became very nervous. By next morning, however, it was in good condition, temperature down, nourishing well from the breast, and having no trouble except frequent desire to move the bowels. On the fourth or fifth day I was distressed to find that the wound, which had up to this time done nicely, showed some irritation, and on the following day there was leakage of the spinal fluid. I feared that this was the beginning of the end, but by touching the spot with lunar caustic, and using every precaution to prevent infection, I was fortunate enough to see the leak stop, and the wound heal nicely.

During this time I thought I detected a tendency to bulging of the fontanelle, but we could not be sure of it, and certainly the baby seemed to be in excellent condition. About three weeks after the operation the child was sent home with the wound healed, except for a small superficial ulceration at one point on the line of incision. Within a few days this entirely healed. All along, however, the baby had shown a tendency to disturbance of the bowels. The stools were too frequent and greenish in color, containing mucus. About three weeks after it returned home it developed a severe attack of entero-colitis, with high fever, and this was complicated by urinary suppression, which soon ended in death.

The second case is one operated upon quite recently, which I hope to be able to show you to-day. The history of the case is as follows:

J. B., aged 2 months, was admitted to my service at the Charity Hospital on February 22, 1906. It is the first child and the parents are both living and in good health. The baby is small, but is breast fed and seems well nourished. There is no sign of paralysis or hydrocephalus. The child shows no cerebral irritation. The bowels and bladder are regular in their action. The infant sleeps quietly, and is not particularly fretful when awake. There is a large, translucent tumor in the lumbo-sacral region, with the usual cicatrix in the center. The sac is very thin, has an ulceration beginning on it, and looks as if it might rupture at any moment. Pressure reduces the size of the tumor, and makes the fontanelle bulge. Diagnosis: Lumbo-sacral meningo-myelocoele.

On February 28, 1906, under chloroform anesthesia, a part of the fluid was withdrawn by aspiration, and an elliptical incision was made around the base of the tumor, going through the skin only. This was then carefully dissected away from the sac proper. Not much difficulty was experienced in doing this, but before it was completed the sac had been opened and the rest of the fluid escaped. There was no shock, the pulse remaining excellent. The cauda equina was attached to the wall of the sac and had to be dissected free. The opening into the spinal canal was small, not much larger than the end of my finger. I replaced the cord in the canal, but was obliged to use a plug of gauze on the end of a pair of artery forceps to retain it in the canal. On this account I treated the sac as I would the sac of a hernia, simply transfixing it and ligating it with a stout chromicized catgut ligature. The muscles and fascia were brought together across the opening into the spinal canal, and the skin was sutured with a subcuticular suture of fine catgut. Over all a collodion dressing was applied, and the baby was sent back to the ward. There was no shock. The child appeared to be in as good condition as before the operation. The subsequent history was uneventful. There was no fever, no restlessness, no disturbance of the bowels. On March 7 we found some irritation of the skin suture line, due to soiling with the urine which we had been unable to entirely prevent, but this quickly subsided, and on March 18, 1906, the child was discharged. Up to this time there has been no sign of any trouble. The baby seems in perfect condition, the wound is well, and there is no symptom of either recurrence or developing hydrocephalus. On February 1, 1907, the child is still in splendid health, weighing 26½ pounds. There have been no symptoms of nervous disturbance.

The Handling and the Diet of the New Born, with some Notes on Goat's Milk.

By DR. LOUIS G. LEBEUF.

The more frequent use of forceps in obstetrics, and the better understanding of modern aseptic methods by the accoucheurs and by midwives, have already greatly diminished the mortality of

women in labor, and naturally, also, the mortality of the new born. The rigid enforcement of milk laws also have helped to save a tremendous amount of lives; yet, in spite of all this, Eröss, in a long list of statistics, shows us that in most large cities, with bad hygiene and crowded tenement houses, we lose over 10% of all new born during the first year of their existence. We cannot correct the inherited defects, the pathological tendencies with which a large proportion of children are born. That in itself is a subject of considerable interest, but it involves some sociological questions which are too serious to attempt to discuss in a short didactic paper. Still, we can, in part at any rate, control some of this death rate, by first improving the surroundings, the environment of the new born, and secondly, we can control entirely the food or fuel which will support healthy life in those little beings. The obligation of the two latter parts of this subject—the environment of a child, the handling of it, and its food, is one of the most serious obligations which society owes to its fellow beings. The first and prominent duty, which the physician owes to mankind is to start this new being properly; a creature which has become a being, a factor in life, at the moment the cold outside air has struck his body, and his fetal circulation has been changed by the first long wail or deep inspiration taken into that of a human being, sentient and conscious with a soul and body to be looked after and protected. We must attempt, from the first, to give this new born factor, this new member of society, the right kind of start in life. To improve him physically we must improve his powers of resistance in the great struggle ahead of him. He has everything against him at first—heredity, bad surroundings and errors of education in his bringing up; and is it a wonder that his path is hard? Yet it is the survival of the fittest, and the care we give the new born, in its environment, in its proper handling and in its food means the future health and welfare of that being. If we accomplish this duty as we should, as conscientious hygienists, we have saved thousands of lives, relieved the heart pangs and sorrow of parents, and helped society in a manner which can be computed in more ways than in the plain dollars and cents which each life is worth to the community.

Dividing this subject for the sake of proper discussion into two parts—First, the handling and surrounding of the new born, and second, its food and its importance.

PART 1ST. The handling of the new born. Most of this is technical and can be easily read in text-books, only as there are some salient practical points to which I wish to call special attention, I will try to hurriedly summarize these points.

Care to the Cord. At the first inspiratory action the infant begins to cry and circulation is changed. Always allow the child to lie between its mother's legs for a few minutes, to allow it to get as much of the blood from the maternal end of the cord as possible. A small flat band or narrow tape is the best thing to use as a ligature. I use most often an aseptic umbilical band, put up in little packages by a prominent drug house. When I cannot get this I use some strong piece of plain bobbin which I sterilize by five minutes' boiling together with the scissors. We have to be very careful not to have the material we use too small or narrow, because we run the risk of cutting through the vessels and later the warm bath or the heat of the bed causes a relaxation which may cause hemorrhage. Also if you ligate the cord between one inch and one and one-half inches from the abdomen, may leave from one-half to three-quarters of an inch of cord beyond the ligature, as very often in large thick cords the excess of gelatinous matter in the cord allows the vessels to be improperly compressed, and if the cord is tied too close to the point of cutting, you may have retraction and severe hemorrhage. Treat the end of the cord, as well as the stump, by dusting it with boracic acid, then wrap it snugly in dry borated gauze with a pad of gauze over it. If this is not convenient, a fresh piece of absorbent cotton, 4 inches square, in which you make a straight cut to the center of it to fit the stump in, and this not to be removed until cord comes off, unless there is some odor, when it should be changed daily, washed with weak per cent of carbolyzed water. After this treatment is accomplished then a snug, comfortable band, and by preference a thick cotton pinned around the abdomen at three places to make gentle and uniform pressure and prevent umbilical hernia. This is to be kept up for about 10 or 12 days, or a week, after the natural separation of the cord. When the navel falls off, continue bathing with borated water or weak carbolyzed water for a few days, using a little peruvian bark, aristol or boracic acid. Later, when the child's diet increases, and remembering the large proportion of digestion performed by the intestines in the very

young, we must change this inelastic rigid band for a more yielding material. The constraining of distended intestines after nursing is one of the most frequent causes of alleged colic crying which I know—a colic which cannot be allayed by carminatives, Mrs. Winslow's soothing syrup or what-nots. We have all of us witnessed little puppies gorging down their meals, a plate of mush or clabber, and can remember the enormous sizes which their abdomen or bellies attain almost immediately. This is a very important matter and one too readily forgotten; we must look to it, though, or our babies become fretful, and the band, even if it is put on loose at first, tightens up under the digestive distension, and we have a child in violent pain and with a disturbed digestion. My rule is to make my little patients wear a special knitted, woven *belly band*, which can be secured at almost all stores. It is sleeveless and fits as aglove, makes gentle pressure over the umbilicus, but quite elastic, so that it stretches with the distended abdomen and keeps it uniformly heated. This can be made of cotton or woollen goods, as one prefers, according to the temperature of the weather.

I desire to exhibit one or two of these. One can not be too careful in this treatment of the cord; there is no reason why this wound should not be treated aseptically as much as any other surgical wound.

During the last 12 or 14 years that I have practiced this care I have not had any trismus or tetanus from cord infection in my own practice.

The bathing of the Infant. That must be done within an hour or two after delivery, usually one-half hour after labor. Wash the eyes in separate water from that of the general bath; a little lukewarm water slightly borated and the washing done with a little absorbent cotton. Then the whole body is washed; first if a good deal of cheese adhere to skin and scalp, rub the infant all over with sweet oil or vaselin, and then the attendant sponges and soaps it thoroughly and then for a minute or two immerses the whole body in the bath tub. The rubbing and friction acts as a gentle massage and undoubtedly helps the circulation, and the sudden immersion invariably makes the child cry lustily, still better establishing the pulmonary circulation. If there is any throat or pharyngeal mucus or phlegm accumulation in the throat,

that must be carefully washed out with the finger wrapt in a wet cloth. If there has been any leucorrhœa in the mother, or if you are at all suspicious of any chance septic condition of the mother's vagina, be certain to at once make an instillation of a few drops of a one per cent solution of nitrate of silver, which is washed out with a weak salt solution, according to Crédé's method. This entire method of bathing to be repeated daily if you have a competent nurse, even before the cord comes off, dressing the cord carefully after each bathing. If you are not certain of your nurse, it is safer to wait until a day or two after the separation of the cord before resuming the baths. The temperature of the baths must be a little warmer than blood heat—about 99 or 100 degrees Fahrenheit. I have seen a temperature of 105° cause a little delicate new born baby turn scarlet, and then peel off entirely afterwards. I do not think it necessary to place anything in the water but plenty of fresh castile soap and elbow grease. Never bathe a child who is cold after the bath or whose lips or finger nails turn blue; look for the cause, but do not bathe it, except by rubbing and by sponge baths. Close the openings in the room during the bath; never allow the bath more than 2 or 3 minutes in a very young child; in the drying, always do it with a certain amount of friction or rough rubbing until the skin gets pink. Use plain talcum powder, but never any powder in excess, as you do not want to interfere with the skin action by closing up the pores too much. Never forget to wash mouth daily with a cloth to prevent any accumulation of curds or milk ferments.

The Clothing. The only thing to do with regards to clothing is to have it of the simplest material—avoid too much flannel, avoid too many pins, always aim at leaving the chest with ample chance for free respiratory action. Do not bind the abdomen too tight. The clothing must be regulated according to the winter changes. A young child has very little animal heat, and if it is placed in bed alone in winter and gets cold, it is very difficult for it to get its heat again. So on cold nights place it in bed with the nurse or put a hot water bag to its feet.

The Hygiene and Ventilation of the Room. That is most important, especially when we consider the proportion of nourishment the child absorbs in pure oxygen during the coldest days; give some ventilation to the room, and have no gas escape and no

stationary washstand in the room, nor any arsenical color dyes in wall papering; send it out in the air daily for 4 or 6 hours.

Bowels, Stool and Urine. As soon as the meconium has been all passed, after the fourth day, when the child's digestion begins to show in a different appearance of stool, we have to be extremely careful in the volume of these stools, of the quantity of urine, their frequency of passage, and their character. That is the great test of a child's improvement or non-improvement. Attempt as early as possible to give it regular habits, by changing towels at a given hour and gently massaging abdomen at those hours. It is often possible to relieve constipation by gently stroking abdomen in a crescentic way from the right groin upwards, then across the abdomen above the navel to the left side and then downward. If there is colic this movement or massage will often untwist some accumulated gas in some coil of intestine. The family practitioner should insist on seeing the stools quite frequently; that is the only way he can positively tell of the proper digestion. Never use opiate for purely cosmetic reasons or to relieve parents when they have lost sleep and rest. If you study the cause of the loss of sleep of a child, you will generally find it in a disturbed digestion, so watch the stools. A little milk of magnesia is as safe a laxative as any I know—sometimes a suppository of glycerine, well greased and inserted with care in the rectum will be quite sufficient to start the bowels. If the stools are too green or too abundant and the change of diet has not relieved the condition, especially if there is much ferment and gases, I first lavage the intestines with a lukewarm water saline enema, and then if the child is over 2 months, I use a combination antiseptic powder of hydrarg chlor. mitis gr. $\frac{1}{20}$, sodium sulphocarbolat. gr. $\frac{1}{4}$ to 1, and bismuth salicylate gr. $\frac{1}{4}$ to 1, and that in a powder, according to the exigencies of the case, every 2 or 4 hours until the stools have changed. One rarely experiences any trouble with the kidneys of the young baby. If there is a little difficulty or slowness in urination, some hot compresses over genitals will generally suffice; sometimes a few drops of spirits of etheris nitrosi, given two or three times, in a little weak tea or sweetened water or milk, will relieve the condition. Sometimes in male children a very much adherent prepuce will interfere with normal micturition, then naturally relief can be attained by detachment of the adhesion or by circumcision.

The Feeding of the New Born and of Young Infants is such an important matter that I have placed the discussion of this in the second part of my subject.

PART 2D. *The Food of the New Born and Its Importance.* The practical purpose and *raison d'être* for this paper is not to repeat information which we should all possess, and which can be easily secured in a text-book, but on the contrary, to relate some of my personal experiences with a special kind of substitution to mother's milk which has been most valuable in my hands.

Hence I will attempt to only briefly summarize in a general review the principal foods. 1st: Breast feeding (A) mother's milk, (B) wet-nursing; 2d: artificial food (A) the preserved or condensed milk, (B) asses' milk, goat's milk, mare's milk, lama's milk, cow's milk and sheep's milk.

1. Our first duty is to train, educate and influence our lying-in patient to make a serious attempt to nurse her own child. We can do this by preparing the mother with this thought ahead of delivery, educate her to the dangers to her child if any other method is attempted, and specially explain to her the maternal reasons for this most natural of all feeding. By a process of simple massage of the nipple points and frequent bathing one can harden the breasts and help to prevent mastitis and cracked and fissured nipple during lactation. I use borated water for this bathing. If there is an inversion or drawing in of the nipple point in primapara it also helps to pull them out, and gives the baby a better hold; always wash the nipple carefully after each nursing. At first we should nurse the child during the first two days after labor two or three times daily. The child sucking the colostrum is helped to pass its accumulated meconium and the nursing soon after labor helps by sympathy the muscular action of the uterus to contract if relaxed, and often helps to expel clots which had been retained. The size of a new born baby's stomach is only large enough to contain one ounce of fluid of bulk at birth, and it attains two ounces only after two weeks, and barely reaches six ounces at six months; hence the necessity to be slow and careful in our increase of the volume of food. After three days increase nursing gradually, every two hours, and gradually as the stomach retains more fluid let the child nurse every 2½ hours, and by the third or fourth month let it nurse every three hours. Try

by all means to have a late nursing at night, and not to have another before early morning. Let us avoid nursing at night whenever the child cries for it.

The Quantity Nursed. If the mother is a good nurse, one breast should be enough for each feeding, and one should alternate the breasts in the nursing. If the child vomits a few minutes after nursing without any curd, it does not signify very much, as it is merely due to stomach overfilling, and can be considered a safety valve, unless there are symptoms of fermentation or gastric indigestion. Milk taken in a young infant's stomach, even if it is not entirely digested, has abandoned the stomach generally inside of one hour or half hour, so that the greater portion of the absorption of the water, the salts, the sugar and peptones are taken almost directly in the blood from the stomach, while the balance of the food, the fats, proteids, etc., take longer to be acted upon by the intestinal digestion. We should never allow maternal nursing in tuberculosis, in epilepsy, in septicemia, or in any condition where the mother's state of health would affect the baby's condition. Still, before a wet nurse is used, we should exhaust every measure with safety to the child before we make the substitution. The social obligations of a too strenuous and worldly pace are the principal obstacles and difficulties which the poor baby has to encounter. The bridge whist craze interferes; the afternoon tea is in the way; and at night the long dinner parties or other social functions which would have to be abandoned at a stated hour to attend the hunger pangs of the poor, crying little sufferer at home. These are the things which interfere with the rich. With the poor it is another tale. Most poor mothers are only too happy for the God sent manna which they carry to their little innocent babe with their love and maternal fondness. But sometimes the drink habit interferes, or insufficient nourishment, for the poor mother dries up the fountain of supply and we must find something else.

(B) *Wet Nurse.* This change should never be made unless a thorough medical examination is made of the subject chosen. Recently a prominent charitable institution in our city, when applied to for a wet nurse by a very good family, recommended and sent a nurse which I found with tertiary syphilis. In another instance, a year ago, a large orphan asylum was using a wet

nurse who had applied to a patient of mine for a position because her charge at the asylum had died. I examined her and found her in the third stage of consumption. Besides, it is questionable whether a woman is morally competent or desirable as a wet nurse, who has within a week given birth to an illegitimate child, and been willing to be separated from that child at its very birth. Such a being cannot have much maternal feeling, and does not seem to me to be a proper nurse.

The Size of the Breast Before and After Nursing must be a guide to a good nurse. They must have hardened before the next nursing, specially if she is nursing her own child at the same time; there should not be too great a discrepancy between the ages of the wet nurse's child and her charge's age. The mother's or the wet nurse's diet has to be regulated also with care, starchy foods, carbohydrates in excess if possible, but also all wholesome nutritious food of any kind should be allowed in ample volume. It is very easy to tell if a child is not getting sufficient food, or if it is getting the wrong food. The child is fretful shortly after the feeding, it seems to crave for more food, it is uncomfortable, and remains at a standstill in weight; it does not thrive, it even loses weight. The normal gain should be at least 4 ounces per week. If the child has a little temperature by rectum 101° or 102° , then the food does not help it, and later it has some indigestion, colic, vomits curdled milk or stools become greenish. That is the threatening cloud, and it is a safe barometric hint to change then, and to change quickly. Let us not be influenced by a mother's statement, by her natural desire to persevere in this injudicious and dangerous attempt at prolonged nursing. She may think it her duty to continue, but she must stop at once, because she may lose her baby. If a mother or nurse has failed to nurse her child at the first confinement, another attempt can be made with precautions; but if the milk disagrees a second time, then never attempt it any more—prepare yourself from the start to use other kind of diet.

2. *Artificial Foods.* I have arbitrarily subdivided this subject, not in point of importance, but for the convenience of description, into two parts, (A) the preserved foods, condensed milk of all kinds, Nestle's food, Mellin's food, malted milk, etc., etc., and again into (B) asses' milk, mare's milk, goat's milk, lama's milk,

cow's milk and sheep's milk, and all the different modifications of what might be called this latter organic group of milks, viz., pasteurization, sterilization, peptonization, maternizing, etc.

All the foods listed in the sub-division A are all excellent, and we all have used them and we still are using them, and undoubtedly will continue to use them for a good many years, because they fill a very necessary requisite, and we have all had most perfect results with them, only they can never take the place of, 1st, *human milk*, and second, *organic milk or animal milk*. This house, or that most reliable house, may explain to us, and undoubtedly it is true, that this or that preparation is unsurpassable because it contains all the chemical parts required or found in a full milk analysis, and still, if it does contain these necessary ingredients, even if it is actually mother's milk or cow's milk boiled down or reduced to a concentrated form so that just a little water returns it to its former constituents. It lacks something more, there is a difference in the fats, in the oil globules, so necessary for animal development, and for stomach and intestinal digestion. They will show you and I have seen them, and certainly you have seen them, John Smith's magnificent Mellin's food baby or somebody's else's child brought up on some other proprietary preparation. Is it not time to call a halt about all this promiscuous use of these preparations? Are we doing the best thing for the future generation? Does a large, dull, fat baby, fed on a proprietary preparation, return to society the same energy and the same pabulum of force and action later, than does a breast fed or a milk fed infant? I am not prepared to say, let those who are wiser or those who have more light on this subject than I have, answer. We spend thousands and hundreds of thousands in experimenting and studying methods of preservation and improvement of cattle, of our forestry, etc. Should we not get some perfectly exact knowledge of all the food changes in the body of our young infant? Some laboratories have already begun experimental work on similar lines, but our governments have not yet taken these matters in hand. Let us hope that the magnificent life saving work done by Prof. Wiley and his department will be emulated, and that the food of our new born will be experimented with and so protected that we will get as good results. In the question of the natural and artificial nourishment of the infant, the difference must be caused a

good deal by this following observation. When the child is at the breast it is ingesting the same kind of human proteid and other chemical compositions, structurally alike. With artificial feeding the proteid is that of the cow or goat or other food, absolutely a different proteid, so I deduce that the principal difference between natural and artificial nourishment lies in that one fact. The same number of carbon, hydrogen, oxygen atoms are possibly present, but there is a difference in the structure and the form in which they are placed with one another, and their natural relation to one another. So that during the assimilation of artificial feeding there is this difference always, that a breast fed child only alters the maternal proteid into its own, while the cow fed infant has to transform bovine casein or proteid into that of the human. A further attempt at elaboration on these lines would lengthen these notes beyond the purpose of this article. Hence I will now try to discuss the conclusion which I have now reached in infant feeding, with special references to my experience, with the use of goat's milk during a good many years of practice in a suburb of New Orleans, amongst many Bavarian and Alsatian Germans, as well as many Italians. I learned over 18 years ago to use goat's milk with the very young, and in cases of marasmus or cholera infantum and general debility, or inanition from acute gastric or intestinal disturbances. This practice was uniformly successful, and I have continued to use it to this day. In fact, among the cases I want to report one was that of my own little infant girl, whose life I considered I saved by using goat's milk. Goat's milk, which is not generally used in America, is very much used in the old world. The French Swiss calls the goat "*la vache du pauvre*." It supplies half of Europe with milk for its poorer classes. It has been known from the oldest times. The Hebrews preferred goat's milk to milk of all other animals. In Greece, in Phenicia, in Arabia, in Rome, we hear of its use. In Rome Pliny says "all the Romans agreed that the goat milk was better for the stomach and more digestible because they fed on shrubbery and such like." There is a tradition that Remus and Romulus, on the banks of the Tiber, did not suckle the *she wolf* that history gives them credit, but on the contrary, nursed at the udder of a goat, and all of Rome's glory and magnificence, with its bravery and valor, and the fortitude and the energy which conquered the whole world, was said to have

come from this humble origin. Naples has named its lovely Island of Capri after this family. A well known sign of the Zodiac also is named after this scraggy individual. The Arabs used the camel's milk in preference, because they allowed it to ferment and it made a most intoxicating beverage. Even the historian of the "Heart of Midlothian" tells us how the heroine in that book was sent to the steep wave beaten crags of the Western Scottish coast to recover and recuperate by drinking of goat's milk. No hardier race exists than the bold Swiss mountaineer, and they live almost entirely on goat's milk.

Composition of different kinds of milk:

	Cow	Goat	Sheep	Ass	Mare	Lama	Mother
Casein	3.00	3.50	4.00	0.60	0.78	3.00	0.34
Albumin . . .	1.20	1.35	1.70	1.55	1.40	0.90	1.30
Butter & fats	3.20	4.40	7.50	1.50	0.55	3.10	3.80
Lactose	4.30	3.10	4.30	6.40	5.50	5.60	7.00
Dif. salts ..	0.70	0.35	0.90	0.32	0.40	0.80	0.18
Water	87.60	87.40	81.60	89.63	91.37	86.60	87.38
	100.00	100.00	100.00	100.00	100.00	100.00	100.00

We see by this chemical chart that asses' milk is the nearest in composition to mother's milk. Next in proportion comes goat's milk. It differs from human and cow's milk more by the nature of its composition than by its composite proportions. Its specific gravity is 1,036. It is specially greasy or oleaginous, of a characteristic odor and taste. The butter from it is specially white, of a delightful, sweet, pleasant taste; it remains fresh an indefinite length of time; the butyric globules are remarkably small in size and do not come readily together, but remain separate; and the character of these fat globules, and of the butter of this milk must be the special cause of its greater assimilability and its potency and benefit in delicate children. My experience, covering eighteen years, with goat's milk, proves to me, though I cannot enter into a critical study or differential analysis of its chemical differences, that most undoubtedly the fact observed by me so often, that goat's milk fat remains fluid, after hours of standing in a hot room, while cow's or other kinds of milk solidify rapidly. Of course, the great desideratum from the earliest studies on milk modification or artificial feeding has been to attain perfection in the greater disproportion of lactoalbumin to caseinogen of all

milks. In the best milk laboratories, after the most careful and exact study of the special requisites which a child may have, needed from its emaciation, its lack of improved weight, and its defective stools, and yet in spite of all this the most conscientious pediatricist often fails. Yet we know, if empirically the child was placed on goat's milk, freshly drawn, properly diluted and the child retains it, digests it, and steadily increases in weight and improves, then most undoubtedly we must admit its efficiency. These observations on the fats obtained in goat's milk have helped me to the conclusion that the liquefaction or ready assistance of the fats in this milk was the special cause of its great value.

1st. If you take three specimens of milk, (a) *goat's milk unboiled*, (b) *cow's milk unboiled*, and (c) *cow's milk boiled*, and then let them stand 24 hours in our climate during June or July, as I have done, frequently at the end of that time you will find (a) the goat's milk almost fresh except a strong, more acrid odor, but still pleasant and fresh to the taste; (c) the boiled cow's milk clabbered to nearly top of the bottle, (b) and the unboiled cow's milk absolutely solid curd. Try and wash those bottles, emptying (a) the goat's milk bottle you find your bottle nearly clean, the fat is so liquid or separated that it barely marks the sides of the bottles; it can be washed with a simple rinsing once or twice, while *b* and *c*, the *boiled* and *unboiled cow's milk*, have to be melted or washed out with hot water before you can get rid of the adherent masses and curds in the neck of the bottles.

2d. Besides, in goat's milk, standing in a pint bottle, we do not find any cream after hours of standing, no deeper yellowish color forming on top of bottles, no separate particles of butter floating about, as you see in cow's milk, nor any butter particles adherent at the bottom of the bottle after it has been poured out, as seen in other milk.

3d. It does not stand boiling, as boiling appears to coagulate the albumin, and to make casein like masses of curdling flocculations on top. These are in a crude way an unchemical statement of the facts as I observed them. Undoubtedly there are other technical reasons, one to do with the greater bacteria destroying power which may happen in this milk, in a greater manner, than in another milk, diminishing the length of time of the curd, or more quickly neutralizing the noxious ferments of toxic decom-

position. The other physical reasons which make this milk so desirable are primarily the immunity of that class of animals from tuberculosis affections, their great variety of diet, principally shrubbery and leaves, etc., making them robust, hardier, healthier. Their udder is also specially free from hair, so they keep more cleanly and are less apt to have excretory particles of fecal matter and urine in the milking. On account of the nakedness of the udders you can always wash them more easily.

In selecting the few cases to illustrate the immense benefit of this diet with the very young baby, I want to say that I am merely relating the most marked cases of improvement in my practice during the last 12 months, one of them my own child, and I want to add further that given a full chance and trial, that I do not believe that I have ever lost any case, even so severe the condition of malnutrition may have been, if I was able to use goat milk for over a week.

Case I. Lucile L., aged 3½ months. A very delicate child from birth. It had had trismus at birth from injury to head by compression of forceps at that time. It had four days of convulsions, and was cured by hypodermic doses of eserine salicylate. This child remained delicate. At 1 month of age it had a grippal broncho-pneumonia, and did not seem ever to regain its weight; the mother's milk did not agree with it; it cried continuously at times, especially after a feeding, it had paroxysms of pain. This condition continued about four weeks and it became dreadfully emaciated; it went down from a former weight of 9 lbs. to 4½ lbs. in weight; it was nothing but skin and bones, and in fact whenever it was bathed and its little naked body was thoroughly exposed it was pitiful to look at. It looked more like a thin, long frog, than a human creature, the bones sticking out through the loose skin; some of the spinous processes of the vertebræ cut through the skin in ugly sores, and you could nearly see the bone. Many attempts at other foods had been made, all the modifications had been tried, but nothing availed. At the end of my resources I told the parents to get goat's milk as a *dernier resort*. It was very hard to find this milk, but the father started out one morning and tramped the entire city to find it, and only succeeded later in the day. I began using it only by 15 drops at a time, diluted half with barley water, and as the child retained it and did not seem to have as much

colic, I increased it to 1 teaspoonful at a time, still diluted. Boiled water was then substituted for the barley. It was not relieved of the colic at once, but within 4 days the 20 or 30 stools it was having daily, diminished to 4 or 5, and the child was saved. It never vomited the milk at any time. This was continued for over six weeks, when it had to be changed for a wet nurse on account of leaving the country resort I sent the child to. This child increased gradually in weight and within four months became a very large, fat, robust child, weighing eighteen pounds within 5 months after using goat's milk.

Case II. Z. M. L. This case was that of a very healthy, robust child at the time of its birth, a full term child weighing 8 pounds at birth. The mother attempted to nurse it but the milk did not agree with the child; it seemed to give it colic, so in looking for a substitution we used Nestle's food, and it seemed to agree pretty well with the child, only it did not thrive or increase in weight at all. At 23 months old, though the child was perfectly healthy, and though it did not suffer in any way whatever, it was losing flesh and getting flabby, so we placed it on condensed milk, which helped it for about a month, but instead of getting better it got steadily worse. After each feeding it had horrible pains, the stools became very frequent, very greenish and watery, and then later nothing but a little squirt of water and mucus, sometimes a little blood serum. They became so frequent and painful that the little sufferer's rectum prolapsed at each time; we had to have an attendant always ready with a towel saturated with a weak solution, carbolized water, to hold the rectum with each stool, and prevent the protusion. Many modifications in diet were then tried. Maternizing and peptonizing the milk, also the barley water, but nothing seemed to agree with the child and it had a rectal temperature of $102 \frac{2}{5}^{\circ}$, and the child looked as if it could not last much longer. I then began goat's milk, plain, raw, diluted with boiled water, $\frac{1}{2}$ and $\frac{1}{2}$, using only a few teaspoonsful at a time until in a week or two I had increased it to 2 oz. each, every two hours. The child did not stop its screaming and violent colics for the first week or two, but the milk seemed to agree with the baby from the start; the stools within three days became less frequent, then changed color, and finally became perfectly digested. The child would still have frequent stools and spells of colic, but

even that disappeared; the rectal prolapsus was controlled and it increased in weight very steadily. The increase was only three ounces the first week, then $\frac{1}{2}$ pound the second week, and within four weeks, when I had taken her to Covington, she increased 1 pound a week. There was a little setback in her condition at that time, due to a severe prickly heat, which caused a peculiar condition of pyemia with severe abscesses of scalp and face. The child was at a standstill then, and even lost, reducing from 15 pounds, which it had attained, back to 13 pounds. Still, when the abscesses were checked the milk was again used, and she rapidly increased in flesh and health. It regained its lost weight and went up to 16 pounds. At that time Mme. Nannie strayed from the path of duty and virtue, and inveigled by a gay Lothario of the piney woods variety, became sick; she had loved not wisely, but too well. Its milk seemed to change in character and we had to abandon it, but fortunately the child was so much better that it could easily stand cow's milk. There is no doubt that the child's (my own) life was saved by the goat's milk. A peculiar thing, which is not all idle comment, is the peculiar odor the baby had while using this milk. Its stools, urine, perspiration, had a distinct fetid, insipid goaty odor. It also became very lively and frisky, and to this day has remained the most active, sturdy and wide-awake little being any one would want to see.

Case III. Schurb. Is a recent one, a case of cholera infantum, the child whose mother had died of consumption a month after birth. German parentage, and was being treated by another physician with all kinds of drugs. It steadily became worse. It had twenty stools a day and vomited all its food. When it had lost over four pounds they brought it to me. I stopped all medicine (it was then five months old) and placed it on plain goat's milk diluted. The old German grandmother was overjoyed at the suggestion, and said that she and all her family had been raised on that milk and that surely it would save it. The only other thing now given was a little salicylate of bismuth and sulphocarbolate of soda. It made a rapid recovery and is now entirely well, though still under the goats milk diet.

Case IV. Is that of a very aggravated case of marasmus, cholera-infantum and septicemia. A case in the country which I helped to treat by the telephone in co-operation with a very com-

petent brother physician in Jeanerette. This child, from a very fat, robust child, had become the wonder of the district in which she lived. Following a bed attack of diarrhea it had a psoas abscess, and remained over two months with a high fever, of over 106° at times. It became so emaciated and thin that it had the appearance of decrepitude of premature senility. It was sat up with, night after night, expecting it to die at any moment. Every known thing was attempted. Wet nursing, peptonizing milk, Horlick's malted milk, Nestle's food, etc. Goat's milk had been tried without a fair chance and abandoned as also useless until the little patient actually cried continuously night and day. After all this it had capillary bronchitis and almost at its last the devoted mother again desired to try goat's milk, starting its use as I had recommended it, by one-half teaspoonful doses of raw diluted milk straight from the udder, immediately after milking. Its diarrhea was checked, its colic was checked also and now three months after its continuous use it has gained 12 pounds. I could multiply the experience dozens of times, but I thought the history of these four cases would prove my contention, that goat's milk is the coming factor in the treatment of weak stomachs and that our government should in its paternal duty attempt by experimental work in model goat farms, to cultivate the best species of goat and give us a chance to give its milk to all our little sufferers who may need it, and also help to disseminate general knowledge about its use and potency.

The paper by DR. T. S. DABNEY on "*Faulty Metabolism in Young Children*," was read by title and referred to the committee on publication. (*Manuscript not furnished Publication Committee*)..

SECTION ON ORAL SURGERY.

The paper by DR. SAMUEL LOGAN, Chairman, entitled, "*Asepsis, in Mouth Operations*," was read by title and referred to the Committee on Publication. (*Manuscript not furnished Publication Committee*.)

SECTION ON MATERIA MEDICA AND THERAPEUTICS.

The paper by DR. J. T. HALSEY, Chairman, entitled, "*The Advantages of Physiologically Assayed Preparations*," was read by title and referred to the Committee on Publication. (*Manuscript not furnished Publication Committee*.)

SECTION ON SURGERY.

The paper by DR. J. D. BLOOM, Chairman, on "*Mechanical Treatment of Fractures of the Femur*," was read by title and referred to the Committee on Publication. (*Manuscript not furnished Publication Committee.*)

The paper by DR. J. M. BATCHELOR, on "*The Ambulatory Treatment of the Femur*," was read by title and referred to the Committee on Publication. (*Manuscript not furnished Publication Committee.*)

Orleans Parish Medical Society Proceedings.

President, DR. JOHN J. ARCHINARD. Secretary, DR. AMEDEE GRANGER.
141 Elk Place, New Orleans.

In Charge of the Publication Committee, DR. AMEDEE GRANGER, Chairman.
DR. HOMER J. DUPUY and DR. E. O. TRAHAN.

MEETING OF FEBRUARY 23, 1907.

DR. P. B. SALATICH read a paper entitled

Report of Two Cases of Infected Wounds of Hand and Forearm Treated with the Bier Vacuum Cups.

Case No. I....DR. S.—First seen January 8, 1907, suffering with three very painful and inflamed wounds of left forearm. Infection staphylococcal in character, result of treating a case of carbuncle. Wounds incised under Schleich's solution No. 1, incisions a third of an inch in length and half an inch in depth. Cups applied to each wound for ten minutes. Forearm dressed and splinted.

January 9, redness and pain much diminished. Cups applied for ten minutes to each wound. Forearm dressed and splinted.

January 11, very little redness and pain, on pressure; cups applied for ten minutes. Splint-discontinued.

January 12, no redness or pain around wound. Cups applied for ten minutes.

Between the twelfth and fifteenth patient was out of the city. No treatment was necessary while away. On return, wounds were practically healed, only a slight dressing required. This patient was cured in one week from the beginning of the treatment.

In this case the doctor as soon as he noticed the first sign of infection applied the cups but without any relief of pain or the other signs of infection. As soon as an incision was made and the cups applied he experienced almost immediate relief.

Case No. II. DR. H. First seen January 5, 1907, suffering with an infected wound of right hand, results of treating a case of streptococcal infection. Wound incised under Schleich's solution No. 1. The incision, a third of an inch in length, half an inch in depth. The wound was so painful that I did not apply the cups until the next day. Hand dressed and splinted.

January 6, cups applied for ten minutes. Hand dressed and splinted.

January 7, very little redness, swelling and pain on pressure. Cups applied for ten minutes.

January 8, redness almost absent, no pain or swelling around the wound. Cups applied for ten minutes. Splint discontinued.

January 9, wound granulating, no signs of inflammation around the wound. Cups applied for ten minutes.

January 10, cups applied for ten minutes, wound bled very freely.

January 11, wound nearly healed, cups discontinued.

January 13, wound healed. Patient was cured in six days from the beginning of the treatment.

No antiseptics of any kind, or packing were used in these two cases. The surface was cleansed each day with tincture of green soap.

REMARKS.—To the physician, who is the one most frequently infected, the rapid cure of an infected wound is of great importance, especially as such a wound generally incapacitates him from doing any other surgical work. In the Bier method of treatment, the time is decreased by one-half or more and two very painful procedures, the packing and injecting of the cavity are not generally necessary. The incisions need not be more than one-third to one-half an inch in length. This is very important in the resulting scar.

The principal benefit derived from the Bier method, as described in the various text-books and journals is from the hyperemia occasioned by the cups or constrictor.

When the cups are used, a secondary or what may be termed the depletory action, takes place. This, I think, is of greater importance than the hyperemia. By this action the surrounding capillaries and lymph spaces are depleted and drained of any infective material present in proximity to the wound, also favoring absorption of the exudate (edema) in the surrounding tissues by relieving the engorged state of the capillaries. A purer supply of blood is also substituted for the one charged with infective material and the serum, or antiseptic of the blood, and leucocytes are better able to assist in the rapid healing of the wound. This is probably the reason why, after using the cups a few times, that the red zone disappears from around the wound and healing begins to take place.

The pain that is always present in and around these wounds is usually diminished after the application of the cups. This is probably explained by the engorged capillaries being relieved by the suction and consequently the removal of the pressure on the terminal nerve filament. That the pain is principally due to pressure can hardly be doubted as we know that a dependent position is always more painful than one of elevation.

It sometimes happens that a patient with one infection will become infected in one or several other places. This may probably be the result of extension of the infection along the lymphatic system. The Bier suction apparatus in relieving the lymphatics of the greater amount of infective material, may present this extension along these channels.

In conclusion the advantages of the Bier method may be summarized as follows:

- (1) The rapidity in which the wound heals.
- (2) The small incision necessary, naturally the smaller scar.
- (3) The almost immediate relief of pain and localized edema.
- (4) The discarding of antiseptics in and around the wound and the packing of the wound which is very painful.

DISCUSSION.

DR. PARHAM: I don't think we should let this paper pass without some discussion, because it is a very interesting one. I don't

suppose there is anything in surgery better established than the Bier method. At the last meeting of the German Surgical Congress, Bier read a paper which was very generally discussed. Twelve surgeons took part. Only one of this number doubted the advantages of the method. Bier reported 1,500 cases of acute inflammation treated, of these, 1,100 were treated by the suction apparatus; the large majority derived benefit from this treatment. The cases which Dr. Salatich has reported, although small ones, indicate a very useful application of the Bier treatment. Boils, carbuncles and other conditions where an opening can be made can be greatly benefited by the Bier treatment. Dr. Guthrie showed me a very useful way of applying this treatment by means of a test-tube filled to the extent of one-half inch with alcohol. The alcohol is boiled and the tube pressed tightly over the opening in the furuncle is made to stick by the contact of the hand over the tube. The vacuum thus created draws the pus into the tube. Chloride of ethyl, or any very volatile liquid, may be used to produce a vacuum. Bier's book gives a large number of applications, such as the suction apparatus, and many others.

DR. BASS: Opsonins may explain some of the beneficial effect in Bier's hyperemia. It has been shown that there is a substance in the blood serum which prepares bacteria for phagocytosis, viz.: opsonins. I happen to know that Dr. Hollister of Chicago has performed this experiment. He took the opsonic index of the exudate from a sinus and found it low, say 0.3. He applied a cup and obtained an exudate nearly as rich in opsonins as the blood serum.

DR. L. PERRILLIAT read a paper entitled:

Chronic Inversio-Uteri Puerperalis, of Fifteen Months' Duration, Cured by the Method of Pozzi.

The statistics relative to the rarity of inversion of the uterus following delivery are estimated in the numerous text-books and articles written on the subject as approximately 1—100,000, based on the figures of Denham, of Dublin, and C. V. Braun, in Vienna. There is every reason to believe that these figures are still correct as applies to hospital practice, but that the relative rarity of cases of inversion to cases of midwifery in private practice is not so

great, for the very obvious reason that this "accident is excessively rare when labor is properly conducted, but occurs more frequently under the unfavorable conditions existing in homes, particularly as conducted by midwives" (Williams), who, as we well know, see a very large number of cases in the populous middle and low classes. The temptation to pull on the cord to hasten the delivery of the placenta, as well as the practice of the too early delivery of the placenta, after the completion of the second stage of labor, are the responsible agents for the majority of cases of inversion of the uterus. In perhaps no other field of medicine does there lie so great an opportunity for the exercise of preventive treatment, by educating the public to fully appreciate the importance of that physiological act, accouchement, and the greater importance of surrounding oneself with the most skillful attention. Although inversion of uterus is an extremely rare occurrence, even in private practice, its danger is ever present, and the dictum of the classics should not be forgotten. If there is any doubt as to the existence of placental adhesions, of a fundal implantation, it follows to be extremely cautious and never to try to hasten delivery without special indications. Haste is not dispatch, and in this case judicious waiting is gaining time. "*Tendu et attendu*," as the French say. (Mantel.) Coming back to the question of the statistical rarity of cases in private practice, Dr. Markley, in the I. M. J., 1905, reports a series of 8 cases in the state of Illinois, and estimates the frequency of inversion uteri puerperalis of about 1 in 5,000. The true figures lie between that and the hospital figures and remain to be determined by a careful statistical study of all the cases reported in literature.

Another point upon which there does not seem to be a unison of opinion is the dividing line between acute and chronic cases. The definition which has received the more widely popular approval is that based on the period of complete involution of the uterus. But that is too strictly iron-bound for the reason that complete involution does not take place in an involuted uterus, and further that the degree of involution susceptible in such a case is accomplished in a comparatively short period of time, two to five days, and by closely adhering to this division we shall be compelled to class recent cases as chronic, a nomenclature which is not compatible with the usual application of the term chronic. Dr. Paul

Mantel, who has reported a series of five cases of inversion cured by the introduction of the Champetier de Ribes bag, inflated with air, makes the dividing line the period of which involution is complete. He contends that the conditions which make possible the inversion must be present to permit reduction with the bag. If involution has been so complete as to destroy these conditions, the more complete the involution, the less likely the reduction by gentle means, and the case becomes one, therefore, for surgery. The old definition of Dr. Emmett (*Principles and Practice of Gynecology*) is the one which, while based on these lines, gives greater elasticity in its application, and should therefore be accepted as the best. "The condition may be described as recent or old, acute or chronic, the one type being represented by the recent inversion of the organ with its attendant alarming symptoms, the other, when the condition either complete or incomplete has occurred, involution of the uterus having taken place after the occurrence of the displacement, which remains in a chronic and more or less permanent form." This definition is of inestimable value in simplifying the handling of the subject of treatments, for clinically, if we accept this division, we can at once describe the cases as those demanding immediate treatment and those susceptible of reduction by gentle measures, and that belong properly to the domain of militant surgery.

The treatment of inversion of the uterus is purely one of mechanics (Reuben Peterson) "Revision is rendered difficult by excessive contraction of the parts in the neighborhood of the cervix. In order to accomplish this the body of the uterus must be rendered more nearly of the same size as the opening in the cervical ring. Therefore two things should be done: reduce the size of the body or increase the size of the ring. These principles are basic and underlie all operations that may be performed for the relief of this condition." Dr. Mantel is the only one who has ever suggested the reduction of the size of the body by the application of a rubber band around the uterus, applied in the same manner as an Esmarch around a limb, from below upwards. The other treatments are directed towards increasing the diameter of the inversion ring, either by pressure excited from within outwards, or through incision of the pillar of the ring. Taxis is the most simple and natural mode of treatment, and consequently was the

earliest and usually the first method tried. The methods of Emmett, Nogoerath, Hirst and Courtney are examples of this principle. Pessaries, colpeurynters and packing come next, illustrated by the methods of White, Champetier de Ribes and Pozzi. And lastly, in 1858, Aran suggested the loosening of the constrictory ring by incision, and marked the beginning of the era of development of the surgery of inversion.

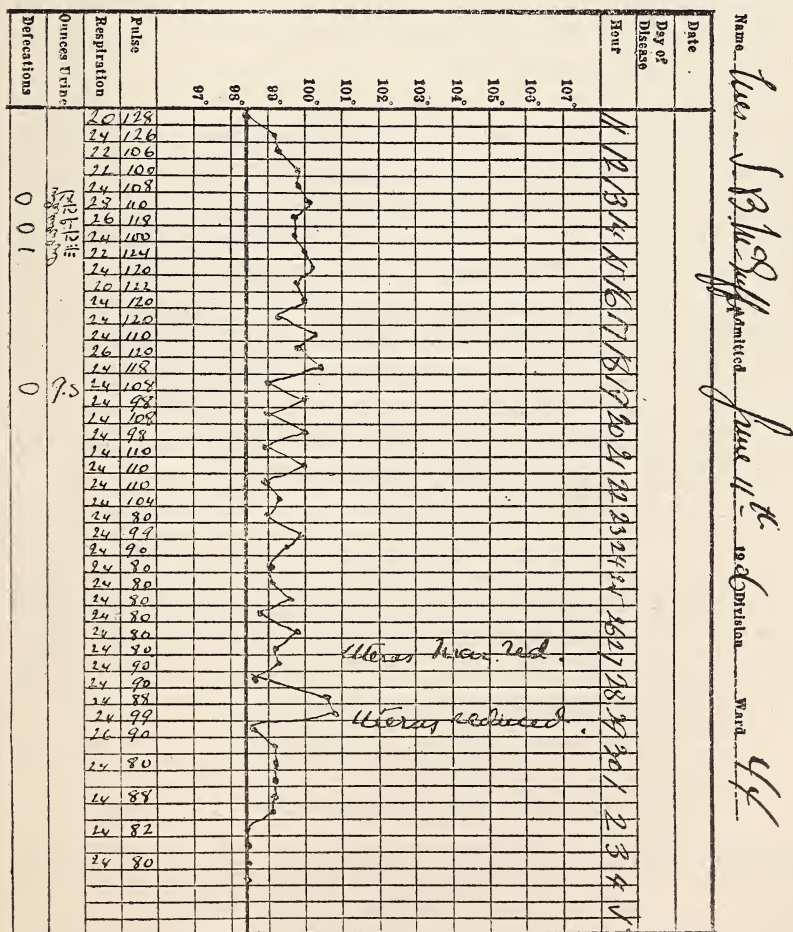
The earliest mention of the treatment of inversion is by Hippocrates (Reed, Text-book of Gynecology). He treated inversion of the uterus by placing the woman on her back, upon a couch, elevating her feet, extending her legs, and applying compresses and sponges against the tumor, holding them in place by means of a perineal bandage. This was kept up for seven days. If it failed the woman's womb was anointed and she was fastened by her feet to a ladder with the head hanging down, and was violently shaken with the object of thus reducing the displaced organ. In 1859 Cortex reported a successful reduction by this method by a Moorish widwife, in Tangier. More recently Atlee (American Text-book of Gynecology) reports an interesting case of inversion of uterus reduced by persistent and long-continued efforts at coition on the part of the husband, after all other treatment had failed. The uterus had been inverted for years, and the husband was subsequently rewarded for his meritorious efforts by his wife becoming pregnant and delivering a healthy child. In the literature of the subject mention is made of a case of forty years duration cured by normal taxis. In our own society I find records of the report of cases by Dr. E. S. Lewis, Dr. Souchon and Dr. Matas, each on record as having reported one, Dr. Lewis in 1879, Dr. Souchon in 1888, and Dr. Matas in 1903-04.

The case that it was my good fortune to treat at the Charity Hospital last summer, while in charge of the service of Dr. Michinard, presents several points of interest which I will try to bring out in the history. The patient presented herself to me in the clinic, so weak that I determined to postpone the examination until she got to the ward. The condition was one of great exsanguination due to a constant loss of blood coming from the vagina for five weeks, with a history of irregular hemorrhage preceding this. Altogether it was from the birth of the last baby. This woman had had several children preceding this one without any trouble.

A midwife was in attendance, and nothing of any startling nature immediately followed the delivery but for a slight temperature, which came on the fourth day and lasted a short while. Irregular hemorrhages, however, soon began to manifest themselves, and there was in consequence a slow and gradual emaciation, the patient losing in 15 months from 15 to 20 pounds. It is worthy of note that an inversion, from the observation of a series of cases, is not attended as a rule by any great danger to the patient, and providing intelligent treatment is applied a favorable prognosis can be made with safety. And in cases of shock accompanying total inversion, it is generally the intense pain of the inversion and not the hemorrhage that is paramount. Even if bleeding be present, and the bleeding comes from the uterine surface, you have the uterus in your hand, and can squeeze it like a sponge. Artificial inversion has even been suggested as a remedy for post partum hemorrhage, or puerperal sepsis. In this case, therefore, the hemorrhages seem to have come later as a result of the pathological changes in the uterine mucosa brought about by the passive congestion from the constricting cervical ring.

After the patient had been brought to the ward the diagnosis was made by bi-manual examination. All the classical symptoms being present, the pear-shaped tumor in the vagina, continuous with the cervix all around, the absence of the fundus above, the cup-shaped depression, and finally the catheterization of one of the fallopian ostia. There was no colpeurynter immediately available, and as the bleeding was very profuse the patient was simply placed in the left Sim's position, and the tumor packed all around with iodoform gauze, to steady it; and then, pressure directly upon the fundus, from below upwards, made with another gauze pack resting against a perineal pad. Counter pressure was made by resistance of the vagina alone, and care was taken not to pack too tightly, to avoid any violent accident. The bladder was catheterized when necessary, the bowels kept loose with salines, and the foot of the bed elevated. In forty-eight hours there was considerable diminution in size, no bleeding, the patient's condition was improved, and the same procedure repeated. On the 27th of June the fundus was reduced and in good position, the adnexa normal. On questioning the patient it was ascertained that she distinctly felt the "womb suddenly go back in place," and there is another point of interest.

Mantel, in his reported cases, calls our attention to this fact in explaining how the bag acts. "In two ways, one mechanical, the other biologic. The mechanical action need hardly be explained, and is largely assisted by the natural tendency of the uterus to reduce itself spontaneously (Baudelocque). The biologic action is explained by the uterine contractions that are set up by the mere stimulation of the mucus membrane of the uterus set up by the contact of the surface of a foreign body. What takes place is another labor, and patients experience a sudden pain followed by complete relief when the uterus regains its position.



Charity Hospital Notes of Case:

Mrs. L. B. M., sufferer; nativity, Louisiana; age, 29; admitted June 11, 1906; discharged July 4, 1906.

Patient somewhat emaciated; claims to have lost 15 to 20 lbs. in the past year. Sallow complexion, mucous membranes somewhat under color, tongue clean and moist, heart normal; arteries soft and pliable; lungs apparently normal; abdomen very flaccid, no tenderness; liver measures 3 in. in mammary line.

Vaginal examination revealed uterus completely inverted; the tips of the fingers coming completely together on bimanual palpation above the tumor. The opening of the fallopian tube was seen and to verify the diagnosis a blunt probe was introduced.

Treatment consists of packs.

Father and mother living, ages 58 and 54. One sister and two brothers living. One brother died when 30 years old, of typhoid fever. No history of rheumatism, neoplasm or tuberculosis. Had scarlet fever when 8 years old; whooping cough when quite young, and also typhus; chills and fever often. C. M. at 14; always regular until the birth of her last child; no pain, 3 days, freely. Has 4 children, the youngest being 15 months old. Trouble began with the birth of her last child; had fever 3 days after delivery, which lasted 4 weeks. Patient had irregular hemorrhages after her delivery; has been flooding continuously the last five weeks.

Urine examination: Leucocytes, bladder epithelium, urates, bacteria, mucus, yeast cells. Sp. gr. 1024, acid.

July 1 uterus completely reduced.

DISCUSSION.

DR. SALATICH, referring to Dr. Perilliat's case, stated that in 1905, while an interne in the Charity Hospital, he saw a case in Dr. Lewis' service. This case was of ten years duration, and was reduced by the colpyreunter bag in eight days.

DR. E. M. DUPAQUIER read a paper entitled

**Sources of Indications for Treatment Critically Examined;
Hayem's Teaching a Good One.**

The object of this paper is to review the sources of indications, to present for discussion a series of comments, and to advocate the

teaching of Hayem, one of the best known professors who occupied the chair of Therapeutics and Materia Medica in the Faculty of Medicine of Paris, during the last two decades.

I refer here to medical treatment only, and to morbid processes out of the reach of surgical treatment.

As you well know, indications are usually, at random, sought in and derived from: Diagnosis, cause, morbid process, symptom, functional disturbance, statistics, nature's curative powers, history, empirical experience or routine. Let us inquire into the matter systematically, in the light of an honest criticism, to clear up much of the confusion existing on several points. That is just what didactic therapeutics must attempt to do for the good of practical or applied therapeutics.

Diagnosis is not a main source of indications.

Of course, during the process of thorough examination of the case to reach diagnosis, information is gathered from which indications are derived, so much so that the case is often treated before the diagnosis can be made out.

Assuming that the diagnosis is reached, what of it?

Diagnosis proper carries with itself a positive indication only in a very limited number of diseases, namely, syphilis, malaria and diphtheria, because in these the diagnosis indicates a true specific remedy. Mild or severe, simple or complicated, under almost any circumstances, the world over, at once, syphilis indicates mercury, malaria indicates quinin, diphtheria indicates anti-diphtheric serum.

Can we say that the diagnosis of acute articular rheumatism nowadays indicates, at once, positively, a true specific remedy? The salicylates, in some form, may act as a "test", it is true, and give the best results, but they do not act in all cases "favorably" as a specific like either mercury, quinin, or antitoxin, in their respective applications. Again, Menzer's antistreptococcic serum has failed in acute rheumatism. Can we say that the diagnosis of acute gout nowadays indicates at once, positively, a true specific? Colchicum, in its best form, the wine of seeds, relieves the patient; but Faulkenstein and Pfeiffer's experiments and records show that "it interferes with the excretion of uric acid; it acts by producing a condition of *statu quo ante rem*, and is, therefore, likely to lead to a rapid return of the symptoms." (*Med. Annual*, '05.)

Can we say that the diagnosis of pneumonia or typhoid, etc., at once indicates a true specific remedy? No. The anti-pneumococcic and antistreptococcic serum, Chantemesse antityphoid serum, Walgen, Silverstein and Tavel's sera, and Wright's inoculations, while giving results, chiefly the latter in typhoid, are not yet accepted as specifics like mercury, quinin and antitoxin. Finally, with the best diagnostic methods, a true or complete diagnosis is not commonly reached, and pretty often it cannot be reached at all.

For these reasons diagnosis itself cannot be considered a main source of indications for practical purposes.

Cause is not a main source of indications.

When the cause is known it can be reached only in a limited number of diseases, produced by animal parasites, intoxications, acquired dystrophy. (Acquired obesity.)

Most of the time, when the cause is known, it cannot be reached, for instance: In the large group of specific infectious diseases, as we see, by the failures or limitations, in practice of internal antisepsis, of serum therapy, bacterio therapy; in altered or suppressed internal secretion, as we see the limitations of opotherapy; in cases of gallstones, neurasthenia and insanity, brought about by trauma or moral causes.

Again, cause of diseases is far from being always simple and entirely known; and, besides "etiology and pathogeny" are included in the study of "morbid process" upon which advanced therapeutics can be based, for it is its main source.

For the reasons mentioned cause can not be considered, separately, as a main source of indications.

Symptoms in many cases are the only source of indications, regardless of cause or evolution of the case. Example: Severe hemorrhage, collapse, asphyxia, severe diarrhea or constipation, severe pain, severe cough and insomnia.

But, while symptoms are useful and rational sources, in pressing disturbances, they are fundamentally insufficient sources, since they do not attempt at controlling the pathological process.

They form an irrational source when employed as an exclusive method, one of the fundamental mistakes of homeopathy, or, when directed to combat a disorder the causation of which remains undiscovered; since symptoms, at times, are "expressions" of a favorable reaction of the organism (fever, diarrhea, sweats), and we should not be bent upon combating the symptoms so obstinately.

Nature's Curative Powers. It is true, there are self-limited diseases, and recovery is often, in such cases, preceded by crisis: (diuresis, sweats, hemorrhage) Nature's own way of elimination. We know this, and it is a source of a great indication "armed expectancy." But, it is irrational to base a method on these exceptional facts and to take as principle, that it is not the physician who cures the patient, but that the patient "cures himself." (Therapeutic nihilism, Christian science, quack's psychotherapy.)

Statistics, indeed, are useful sources and we acknowledge it. Statistics, if genuine and authoritative, based on no less than 10,000 cases, are a source of indication (tubbing in typhoid, Wright's anti-phoid inoculations). But, its usual association with empirical trials is deceiving and, nowadays, we cannot take *routine* as a therapeutic principle.

History and examination of organs are most valuable sources from which we derive the peculiarities and exigencies of each individual case under observation. This is a great point in practical therapeutics, since we do not treat disease in the abstract.

The *morbid process* is the most valuable source of all, as it is based on progressive pathology. The conception of the morbid process leads to the arrest and control of lesions and to deep, underlying conditions. As the conception of it depends on the knowledge of progressive pathology, it follows that treatment is progressively enlightened. While not all of the great morbid processes are known, yet it is that part of medical science that progresses the most, and promises to develop ever so much more.

The morbid process includes the fundamental elements of disease (fever, inflammation, etc.)

Is it possible to condense all these notions into one system of sources with a main source to be guided by, in practice?

This was the aim of the teaching of Hayem, a great teacher, a pathologist, clinician and therapist, who left a lasting impression on French medical science and art.

Hayem's teaching is classical. It cannot be carried out unless the foundation on which it rests is in the practitioner's possession, namely: Medical education, medical culture and bedside training. He must be familiar with medical pathology, he must keep posted after his college course, and improve his case-taking ability. These are the essentials. Next, he must form a clear conception of what

therapeutics is in order to distinguish it from *materia medica*. Therapeutics is the scientific search for indications in each individual case. *Materia medica* is a catalogue of remedial agencies and a record of their actions. The additional index in books giving a list of diseases with a long list of remedial agencies written opposite each disease, as suggestions, is too often depended on. Any layman could practice with an index like this.

At one stroke this premise to Hayem's teaching does away with unscientific methods, empiricism and routine.

The next step in Hayem's teaching gathers all the *expressions* of the case, under a broad term "morbid element," common to all diseases; each case is analyzed, decomposed into its "morbid elements," "constituents," and from each of these elements are derived indications for treatment. Here is an illustration:

A case of la grippe. Respiratory form.

Case-taking records: 1° malaise, lassitude, physical and mental depression. All these are expressions of a morbid element or constituent of disease, common to many other diseases, *adynamia*. 2° temperature and pulse, are expressions of a morbid element, a constituent of disease, common to many other diseases, fever. 3° acute catarrh of the mucus membranes, are expressions of a morbid element, a constituent of disease, common to many other diseases, inflammation. 4° Soreness in back, limbs, aching of the muscles, stitch in chest, are all expressions of a morbid element common to many other diseases, pain.

Each of these morbid elements has its own physiology, in other words its "process", out of the normal, which process is studied by progressive pathology.

These elements of disease, the common morbid elements, are the main source for treatment. They indicate rational treatment at once, even though the cause or the diagnosis are not known, as is often the case.

To each morbid element are opposed agencies to combat it, and the whole of these agencies, not necessarily drugs, are the *medication* of that particular morbid element.

The word medication demands explanation. It must be taken in the acceptation given by Hayem. The whole of the agencies constitute the medication as one would understand it commonly. But there is an additional idea that characterizes Hayem's acceptation. It is not so much the agencies themselves that constitute

the medication, but the spirit back of them, that puts them into play, the intention behind them aiming at the object, in other words the intelligence and mind that reasoned out the whole action to be produced.

It is opposed to the common conception or acceptance of medication by blind routine and empiricism.

Thus, to each morbid element is opposed a scientific medication which becomes the particular medication of that particular "morbid element."

Examples: The elements, *hypertension*, opposed by hypotensive regime, vaso-dilators, depletion of circulation (skin, bowels, kidneys). *Dropsy*, element opposed by dechlorination first of all, etc. Thus, again, the common element, *infection*, calls for disinfectant medication, *adynamia* for sthenic medication, *fever* for antipyretic medication, not necessarily drugs, *inflammation* for antiphlogistic medication, etc.

Here is the list of the other common morbid elements originally studied by Hayem: Dropsy, hemorrhage, anemia, diabetes, obesity, pain, insomnia, delirium, convulsions, paralyzes cardiac kinesitaxy, cardiac asystoly, cardiac ataxy or neurasthenia, dyspepsia, dyspnea, cough, expectoration, albuminuria, uremia, sweats.

From the study of these morbid elements Hayem derives indications and he looks in the records of materia medica for agencies to fill the indications found, and the necessary agency is too often lacking, hence our failures.

But, in spite of this deficiency in remedial measures, the fact remains that a good principle for practical work is set here. It is left to future progress to improve the lucid methods of "medications."

The specific remedy, Hayem calls *treatment*, as specific treatment is the ideal therapeutic achievement. But, unfortunately, it is limited to a few diseases. We are, yet, far from the time, when to each specific cause shall be opposed a specific remedy. Until the time therapeutics is thus simplified (it will never be so, for all diseases are not specific) we had better look to some practical scientific source of indications for treatment by means, not of "specifics," which are few, but by rational medication based on observation of each sick individual, knowledge of pathology and the physiologic action of remedial measures.

Hayem's teaching aimed at a method, a systemization, an ordinate arrangement of scattered notions upon which therapeutics rested. His teaching is a co-ordination, a direction, of ideas, where confusion existed; it is certainly an improvement on routine, and I hope I have succeeded in making this quite clear and apparent to my hearers. I thank you, for your attention.

DISCUSSION.

DR. HALSEY: I have listened with interest to Dr. Dupaquier's paper, and feel somewhat at a loss as to how to discuss it. I think treatment must depend very largely indeed upon the intellectuality and experience of the given physician. It is a platitude to say "we have the patients to treat and not the disease," and yet I know nothing better to say. I would like to discuss some of the sources of indications for treatment mentioned by Dr. Dupaquier.

The matter of diagnosis. There is a great tendency to minimize the importance of diagnosis as a help to treatment. One particular in which the diagnosis gives us important aid is that symptoms are of different significance in different diseases. If we find high temperature in a patient whom we think has typhoid fever, we treat accordingly. We would combat the high temperature. On the other hand, if the diagnosis of grip or pneumonia had been made, we know that the high fever will last only a short time; hence, we would not concentrate our energy in combating the high temperature, as in typhoid fever, but would direct our efforts to combating other symptoms, sustaining the heart, and so forth. If we find a pain in the chest, it may be either pleurisy or pneumonia. If we diagnose the pain as neuralgic, we would follow a different method of treatment. When we come to cause as an indication for treatment, there we find our hardest task. An example of how cause is sometimes a source of therapeutic indication would be where the morbid condition of the patient is the result of overeating, etc.

In such a case the removal of the cause is the first thing to be done and the best thing we could accomplish. The relief of some symptoms is imperative, although the measures employed to relieve such symptoms may have no effect on the morbid condition of the patient. Example: In a bad cardiac case, we have often seen a hypodermic of morphin bring relief. Here we were using a drug

which we know has no effect on the diseased organ, namely, the heart; but by making our patient comfortable and by securing a period of rest we have given the heart the chance also to rest, and so succeeded in aiding in re-establishment of compensation.

In regard to statistics, we medical men put our whole faith in certain sorts of statistics, the result of more or less experience with morbid conditions. We have a case which gets along nicely on some drug. We try the latter again and it still gives satisfaction and we vaunt its merits right and left. The morbid process itself does not often give us indications for the use of drugs, but it often tells us what cannot be accomplished, and should check indiscriminate and meddling medication, which, like meddling midwifery, is to be condemned.

DR. PERKINS: Undoubtedly the ideal basis for treatment of any kind, medical or surgical, is a thorough analysis of the case. It is ideal to analyze all forces which are at work, determine which ones can be advantageously modified, and then to obtain a mental synthesis of the various deductions, and then begin to map out the treatment.

Unfortunately, it is not always possible to thoroughly analyze. There are too many unknown, or imperfectly known, factors in every case of illness. To this day we cannot say with certainty what would be the effect of an ounce of magnesium sulphate. There is and always must be a lack of mathematical precision about the science of medicine. In the game of chess there are only sixty-four squares on the board, and thirty-two men, and many brilliant intellects have been devoted to the study of the possible combinations of the game. And, still, chess has not been reduced to anything like mathematical exactness. It is too complicated. How much less, then, are we to expect ideal precision in medicine. Even that degree of scientific precision which is possible in animal experimentation cannot be applicable in the treatment of the human patient, for we dare not neglect which may aid in saving a life, a limb, or an organ, and are, therefore, often driven to obscure the clarity of the scientific deductions from a given case because of the confused multiplicity of agents and methods employed. The diagnosis should be the real basis of all treatment; although, in many cases, we still have to treat the symptoms where the diagnosis is unattainable.

N. O. Medical and Surgical Journal

Editorial Department.

CHAS. CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

The Teaching of Tropical Medicine.

Attention should be given to the opening article in this issue of the JOURNAL as it considers a matter which will soon be of importance to the entire profession of the United States. For many years Great Britain has distributed special commissions to various dependent colonies whose province it has been to investigate and report on the diseases which prevail. As yet no extensive attempt has been made on the part of the United States Government to cover the same field. Occasional commissions made up of Marine Hospital Service surgeons have investigated special diseases attracting attention at the time. These have been of more or less value, depending entirely upon the personnel of the commission and the earnestness of the investigation.

The work on the Isthmus of Panama and in the Philippines to-day promises results of material interest along this line, and the United States Army medical and surgical staffs deserve the credit attached thereto. Each day promises a wider association with the tropical countries of Central America and the Caribbean and with our South American neighbors. The diseases which are common in these countries, but exotic in our own, may appear with more regularity than heretofore, and the opportunity for studying these must grow. With New Orleans as the natural port of entry serious attention should be given to the study of these diseases and the suggestions as made by the author of the paper referred to cannot be considered as idle. Already the New Orleans Polyclinic has a special Chair devoted to the teaching of tropical diseases, and this particular branch has received attention now some years. The facilities, however, for investigation, are limited, and wider scope should be given for the general instruction on these particular diseases. That they are important cannot be gain-

said, as already at least three extensive texts have been written on Tropical Diseases.

New Orleans, above all other ports of the United States, has in the past presented more of the tropical diseases than any other, as medical reports from time to time will confirm, and this should be a logical site for a School for Tropical Diseases when the time comes for its incorporation. The statistics contained in the article of Dr. Brewer are a strong argument for this opinion, but we feel that some remark should be made regarding the impression conveyed on the point of yellow fever, as the statistics refer to certain of the epidemic years and might mislead the general reader led to gather that this was an estimate of usual conditions which, contrariwise, present the absence rather than the presence of yellow fever, and the general impression is that this disease is to be entirely eliminated from this and other Southern States.

The Hospital and the Medical Staff.

That New Orleans does not stand alone in the criticism of its hospital system is evidenced by the prominence given by the *Journal of the A. M. A.* to a recent article in the *American Journal of Medical Sciences*. The subject in particular which receives consideration in these two papers is the arrangement of the house staff, while the visiting staff does not escape criticism.

We have already called attention to the position of the visiting staff in its relation to the Charity Hospital of New Orleans, and while the suggestions which are made in the above articles might apply to other institutions, they fall here, where the visiting staff is really a perfunctory adjunct to the local institution.

Most public institutions of the hospital class occupy either a political relation to the general public or else are sectarian in type. In the first class the state satisfies itself in delegating the entire management of the institution to the political favorites of the chief executive, whether municipal or state; in the second class, routine usually results in a system which grows barren of a personal relation, and it is only under conditions of high endowment that the latter form of institution really reaches the first standard of an effective administration.

It is highly desirable that the whole method of hospital adminis-

tration as practiced in this country should be changed so that patients should really receive the personal consideration of the visiting staff.

The political complexion of the Charity Hospital in New Orleans is hardly apt to be influenced by our opinion, but we feel that the JOURNAL must occupy the position of advisor to the profession at large until their united efforts may be directed at the political equation until some respect for both patient and visiting staff may be reached.

As at present constituted little or no attempt is made at a proper differentiation of the applicants for admission to the Charity Hospital, and, while the records of the institution have materially improved under recent methods, it still remains that the usefulness of the Hospital is absolutely limited so far as its value in its records to the profession generally is concerned. The review of the annual report of the Charity Hospital shows that the same method of analysis prevails from year to year, and that this in large degree is perfunctory and most often is far from presenting even exact diagnosis.

These conditions will hardly change until the spirit of ambition is stimulated in the visiting staff by a proper recognition, a recognition which should allow the direction of the hospital by a majority of those interested in its purpose and its welfare. So long as the selection of the visiting staff rests with the arbitrary provisions as at present, and so long as the visiting staff is made to understand that its purpose is solely in obedience to a law which directs their relation, and that this relation is limited in its function without even recourse to a higher authority, the work done at the Charity Hospital must be certainly inferior to that at institutions with far less pretense.

It must require the united efforts of the profession of the state and an appeal to the Legislature itself to change the methods in vogue, for if the individual opinion of the visiting staff of the Charity Hospital were presented in detail it is quite certain that the unanimous desire for another method would find expression.

A proper hospital should provide a qualified externe medical staff, and not students, who should thoroughly examine applicants for admission in order that they shall be properly distributed to the different services in the hospital divisions. The care of these

patients should be under the direction of able and tried visiting physicians and surgeons with the authority to direct and handle them according to approved methods, and their care in the interim of the visits of the supervising staff should be under graduated physicians accepted by the institution only after a proper standard of preliminary competitive examination.

For many years the Charity Hospital has stood as an example of dereliction in these regards, and the profession has not been blind to these faults, but the ways and means of accomplishing a revision have as yet not presented, nor will they until the effort is made by that profession itself.

Tuberculosis.

The medical profession is well aware of the ravages committed in all parts of the civilized world by the White Plague, and it would scarcely be worth while to call their attention to that at the present time, but for two reasons. First, it sometimes does good to call attention in a pointed manner to conditions which we are very apt to overlook from their very familiarity, and second, because at last there seems to be a determination in this State, both on the part of the profession and of the laity, to fight this terrible scourge. The Anti-Tuberculosis League has been organized and its moving spirits seem to be duly imbued with the importance, nay necessity, of their task, as well as of its magnitude. Furthermore, our state health officer is giving the matter considerable attention and intends to bring it up before the conference of health officials which is to take place in Opelousas early in May.

A cursory examination of the monthly bulletins of the city Board of Health will show that during the past six months there occurred in the city of New Orleans about 540 deaths from tuberculosis, which represents approximately one-sixth of the entire mortality. This fact alone is suggestive, although not as startling as the figures furnished for the city of Paris during the week from March 10 to 17, 1907, when the deaths from tuberculosis in all its forms totaled 298 out of a mortality of 1157, or fully one-fourth.

We could go on quoting figures more or less terrible and significant from different regions, but we feel satisfied that our readers

are well aware of the condition of things and that it will be necessary only to remind them of such in order to enlist their interest in the efforts both of our state health officials and of the Anti-Tuberculosis League.

State Medical Society Meeting.

The meeting of the State Society will take place on May 14, 15 and 16, 1907. The Chairman of the Committee of Arrangements reports that all preparations are practically concluded and that the meeting promises to be the most interesting ever held, while the entertainment feature will be even further developed than formerly. In order to break the record once more in all particulars it is only necessary that the members show a proper interest in the state organization by their attendance. In the end every one is better off for getting out of the rut, and the busiest men can manage it if they make up their minds sufficiently hard. We hope that all will give due weight to the various arguments in favor of coming, and will come.

The Conference of Health Officials.

The President of the State Board of Health has called a conference of the parish health officers of the State, and this will be held in Opelousas on May 2, 3 and 4, 1907. This conference promises to prove of value by bringing about a better understanding between the state and the parish officials. The President of the State Board of Health will no doubt present important questions for consideration, and we trust that among the projects for improvement in the state health laws he will suggest some change which will make the appointment of parish health officers come from the State Board of Health, as, in our opinion, this is about the only maner in which the latter officials can be made properly amenable to the authority of the State Board.

Abstracts, Extracts and Miscellany.

Department of Obstetrics and Gynecology.

In Charge of DR. P. MICHINARD and DR. C. J. MILLER, New Orleans.

SYMPTOMS OF CANCER OF THE UTERUS. John G. Clark (*Jour. Am. Med. Ass'n*, December 8) gives the suggestive signs which should be investigated by an exhaustive examination in any woman between 22 years and the climacteric period as follows: (1) Any deviation of the menstrual discharge in the way of an excess or an intermenstrual discharge; (a) a mere show after slight exertion, defecation or coitus; (b) increasing length of the period, even if only one day. (2) An exacerbation in amount or change in character of the discharge in a woman who may have had a simple leucorrhea for months or years. Of these changes a free aqueous, acrid, or blood-tinged discharge is especially portentous. (3) A leucorrheal discharge in a patient who has never had it before. (4) Every atypical discharge in a woman after the menopause. These cases are especially liable to cancer and should, if possible, be even more exhaustively examined. (5) Pelvic pain of more than a few days' duration should always be an urgent reason for examination.

LIGATION OF THE PELVIC VEINS IN THE PYEMIC FORM OF PUERPERAL FEVER.—Georg. Friedmann (*Münch Med. Woch.*, September, 1906) recalls two methods of treating puerperal fever; destroying the cause of the poisoning by silver, or serums, and the surgical means which are curettement in septic endometritis, and total extirpation. When thrombs form, the ligation of the pelvic veins is the best treatment. The spermatic vein and the hypergastric veins are both at fault, and all four must, in the worst cases, be ligated, causing severe edema of the external genitals. The septic condition attacks not only the inner surface of the veins, but affects the connective tissue surrounding them. Ligation of the veins prevents peritonitis, metastases, endocarditis and pulmonary embolism. The author reports a successful result in a very severe case. (*Amer. Jour. of Obstet.*, January, 1907.)

INSTRUMENTAL PREMATURE LABOR IN PRACTICE.—O. Polano (*Münch. Med. Woch.*, September, 1906) speaks of the experience of the clinic in Würzburg with induction of labor. Among 1,952 cases of labor, with 119 contracted pelvis, there have been 18 cases of induction of premature labor. He gives the comparative value of the three methods—bougies, rupture of the membranes, and metreurysis. The sterilized bougie, introduced between the membranes and the uterus was most frequently used, but is very uncertain, after two weeks trial having proven useless. There is danger of infection and hemorrhage from separation of the placenta. Rupture of the membranes is sure in the majority of cases, but fails in some. It is relatively slow, taking from 77 to 80 hours to produce the desired effect. This delay is hard for the operator. Introduction of an inflated rubber balloon between the membranes and the uterus is the best method according to the author's views. The balloon is sterilized, introduced with forceps, and then inflated.

In the Würzburg hospital the operation is done only for contracted pelvis, or for general diseases threatening the life of the mother. In order to obtain natural pains quickly it is best to use alternate pressure and relaxation, by letting the contents of the bag escape. When the balloon is forced out the uterus may reclose, or there may be an entire failure of contractions. After any one of these methods the uterus will usually expel the child without assistance after the membranes have been ruptured. The author believes that the best method is far better than those in which the patient must lie for hours and days waiting for delivery. (*Amer. Jour. of Obstet.*, January, 1907.)

Department of Therapeutics and Pharmacology.

In Charge of DR. J. A. STORCK and DR. J. T. HALSEY, New Orleans.

HYPERCHLORHYDRIA IN THE GOUTY.—Magnesium peroxide gives prompt relief in hyperchlorhydria. It not only gives immediate relief of the pain and discomfort by its neutralizing effect on the excess of acid, but it also parts with one-half of its oxygen, and acts as an internal antiseptic. It is a white, taste-

less powder, and is best given in a little milk in doses of 20 to 30 grains three or four times a day, taken one hour after meals. If it exerts too great a purgative effect, the dose should be diminished.

J. A. S.

ACUTE BRONCHITIS.—During what is called the dry stage of acute bronchitis, when the patient has a racking cough and a sense of rawness in the chest, the following mixture will be found to be extremely useful:

R

Vini antimonialis	mvi.
Vini ipecacuanhæ	mx.
Liquoris ammonii acetatis	̄ii.
Spiritus etheris nitrosi	mxv.
Aq. chloroformi	ad ̄i.

Misce. Ft. Mist.

Two tablespoonfuls to be taken every four hours.

Following out the late Sir Andrew Clark's teaching, that it is necessary "to cause the bronchial tubes to sweat," Sir William Whitla suggests that the following may be administered after the first twenty-four hours:

R

Antimonii tartarati	gr.i.
Liquoris morphinæ tartarati	̄ii.
Vini ipecacuanhæ	̄ii.
Aq. camph.	ad ̄vi.

Misce. Ft. Mist.

One tablespoonful to be taken every three hours.

He says, however, in the case of the children, that it is unwise to prescribe opium and morphia, so far a child two years of age, the following mixture is useful:

R

Vini antimonialis	̄i.
Vini ipecacuanhæ	̄ii.
Liquoris ammonii acetatis	̄iv.
Syrupi tolu	̄iv.
Aquæ	ad ̄ii.

Misce. Ft. Mist.

One teaspoonful to be taken every two hours.

Directly the cough becomes easier, and the mucus from the bronchial tubes more readily expectorated, the vinum antimoniale must be discontinued. Sometimes a stimulant is required in these circumstances. Some preparation of ammonia is indicated, and the following may be prescribed:

R

Ammonii carbonatisgr.iii.

Spiritis ammoniæ aromaticimxx.

Aq. chloroformiad ʒi.

Misc. Ft. Mist.

Two tablespoonfuls to be taken every four hours.

Every effort must be made to enable the patient to get rid of the mucus and mucopus, which accumulate in the bronchial tubes, and so long as there is any secretion collected there, no drug must be administered to allay the cough.—*The Practitioner.* J. A. S.

Department of Nervous and Mental Diseases.

In charge of Dr. P. E. Archinard and Dr. Roy M. Van Wart, New Orleans.

THE ETIOLOGY OF CONVULSIONS IN INFANCY AND CHILDHOOD.

After a study of 250 cases McIlraith (*Medical Chronicle*, November and December, 1906, and January, 1907), concludes:

1. Convulsions are most frequent during the first year of life and not very frequent after the third year.
2. The predisposing causes are "an inherited neurotic taint" and rickets.
3. Healthy children born of healthy parents rarely suffer from convulsions.
4. In children suffering from convulsions there is frequently a history of ill-health in the parents, especially in the mother during pregnancy, and this acts by lowering the vitality of the child and rendering it more liable to disease.
5. The predisposing are more important than the exciting causes.
6. The family history of children suffering from convulsions is bad. Frequently the brothers and sisters suffer, and the mortality in these families is high.

7. Only a small proportion of cases can be ascribed to organic disease of the brain.

8. Only a small proportion of cases of convulsions can be ascribed to injury at birth.

9. The most common cause of convulsions in the first two months of life is reflex irritation from the alimentary tract.

10. The great majority of convulsions are due to reflex causes.

11. Dentition is rarely a cause of convulsions, and only when some predisposing cause exists.

12. Gastro-intestinal disorders are the chief exciting causes of convulsions.

13. Convulsions are by no means as frequent as generally supposed at the onset of acute fevers, such as measles and pneumonia. They are more common at the onset of pneumonia than at the onset of measles. When they do occur there is usually some predisposing cause present.

14. In several of the cases of convulsions associated with whooping cough a predisposing cause is present. Convulsions are by no means frequent in whooping cough when no predisposing cause exists, and no complications occur.

15. Convulsions in early life may be the first sign of epilepsy, or may give rise to that condition in later life, and are more likely to become epileptic when there is no obvious cause for the attack.

16. The fundamental cause of convulsions is some predisposing cause.

AUTO-SUGGESTION AND SEASICKNESS.—(*Influence de l'auto-suggestion sur le mal de mer.*—Zbinden, *Archiv. de Psychol.*, August, 1906.)

A friend of Dr. Zbinden, with no previous sea experience, engaged himself as ship's surgeon on a voyage from Hamburg to Chili. The ship was due to sail during the night, and at 2 o'clock the surgeon was awakened by noises as of a ship on its course, and was seized with severe vomiting. In reality the ship was still in port, and the noises were due to the loading up of cargo. Shame at his impressionability cured the surgeon of the tendency to nausea, and he made the voyage without mishap. Following out the hint Dr. Zbinden made observations on himself and his fellow passengers during a rough voyage of three days from Norway to England. By repeating to himself that he would not be sick,

walking about, eating and smoking freely, and generally comporting himself like the old sea-dogs on board, he succeeded in being the only passenger unafflicted. Some experimental suggestions he made to fellow-passengers met with success. He remarks that the mere fact of seeing somebody sick may have on other people a suggestive influence analogous to that of a nervous tic, which may contaminate a whole form at school. To guide check experiments he sums up his attitude as follows:

1. Seasickness is in all probability a neurosis.
2. It can be provoked or inhibited by auto-suggestion.
3. The fact of distracting the patient's attention from his woes assists in the cure as in other neuroses. (*Rev. of Neur. and Psych.*)

Department of Ophthalmology.

In Charge of DRs. BRUNS and ROBIN, New Orleans.

At a meeting of the Wills' Hospital Ophthalmic Society, Philadelphia, Dr. Fisher exhibited an interesting case of traumatism from a fragment of tool or coal which had been inflicted two weeks' previously. The foreign mass had torn through the lower outer corneal edge and ciliary region of the right eye. There was a localized opacity of the crystalline lens and adjacent capsule in the wounded area. Intraocular tension was normal. The case being a new one in the hospital, it was the consensus of opinion of those present that the X-Ray should be immediately used and attempts made, if possible, to remove the foreign mass, do an iridectomy, and remove the lens; the case to be reported upon at the next stated meeting.

Dr. Oliver exhibited a curious type of traumatism in which the corneo-scleral limbus and the underlying iris had sustained a clean-cut incision from a large piece of steel, that had not penetrated any further into the eyeball. The two flaps of the wound were situated upon different planes and levels. The anterior chamber was closed. There was no reaction. The wound healed. Radiographs failed to show the presence of any foreign body in or

around the eye, and the patient recovered with the restoration of the parts to their normal position with a scar which was only visible by strong concentration of light and high magnification. There was full vision and large uninterrupted fields. Treatment had been limited to the use of iced compresses, atropin, and rest in bed.

Dr. Oliver showed a case which he had seen two hours after an accident, and in which a drop of eserine had been instilled, carrying a small iris prolapse back into its normal position, and giving a round pupil without any appearance of traumatism other than a small slightly concentric vertical cut through the cornea. The following day, the patient reported with a localized iritis, a spongy deposit upon the anterior capsule of the lens, and a deep mass of lymph in the bottom of the anterior chamber. Vision was reduced from practically normal to light perception. The patient was immediately admitted to the hospital and placed in bed. Hot compresses were employed, and changeable irideplegics and cycloplegics were used. All of the signs of inflammation subsided, and the patient, one week after he had been injured, recovered with full acuity of vision,—two small posterior synechia in the position of the previously bruised iris alone remaining. He brought the case before the society to illustrate a principle which he and Dr. Fisher had established in their hospital services a number of years ago—to immediately excise all prolapses of the iris tissue, no matter how small or recent they might be. Dr. Fisher agreed with Dr. Oliver in reference to the advisability of such a procedure, and had made it an unalterable rule to do this in all cases of this kind since the time mentioned.

Dr. Ziegler spoke of a case with the history that a piece of steel had been driven into the eye several years previously, cataract developing. The patient had been in the hands of a practitioner who had failed to make use of X-ray study. The moment that Dr. Ziegler saw the case, he ordered radiographs to be made, with the result that a foreign body within the eyeball was recognized. The mass was immediately removed, the cataract extracted, and vision with glasses was brought to almost normal; thus proving the direct advantage of X-ray study in every suspicious case.

Dr. McCluney Radcliffe made mention of a case in which two sets of negative studies with the X-ray had been made, in spite

of the fact that he felt sure clinically that a foreign body was within the eyeball. A third series of plates gave an undoubted shadow with its localization. Immediate operation was resorted to, and a foreign body was successfully removed, leaving an useful and unirritated eye. The foreign body was two millimeters square in size. He also spoke of some rare types of traumatic cataract in which there was not any apparent external wound. In two cases that he had seen, the character of traumatism was extremely slight, one being the result of the shaking of a piece of light dress goods in which a closed eyelid was struck, and in which a resultant cataract was most probably caused by capsular breakage.

Dr. Oliver gave a brief account of a case that he had seen two weeks previously, in which the findings of a carefully made X-ray study coincided exactly with those from a series of examinations of the visual field; it being his rule whenever possible, to have the field of vision gone carefully over by a competent assistant. In this instance, a peripherally situated scotomatous area of positive type, sharply cut in outline, made him feel that either a small sector of the optic nerve had been injured or the adjacent retina had been seriously wounded. The foreign mass, a piece of steel some fourteen millimeters in length, most accurately located by Dr. William W. Sweet, showed that its posterier extremity was protruding through the posterior portion of the eyeball some two millimeters to the temporal side of the globe, and that it had cut the optic nerve in actual relationship with the lost portion of the field. An incision in the proper place being made, the foreign body was withdrawn upon the first essay of the magnet.

An informal discussion upon the use of iced compresses in cases of traumatism, both accidental and purposive, gave some interesting facts in regard to the first establishment of this form of practice in the hospital. Drs. Fisher, Oliver and Ziegler related some details as to their difficulty in overcoming the many objections offered to the plan that they had encountered during the introduction of a method which is now so universally employed in the hospital, and which has met with so much success.

Louisiana State Medical Society Notes.

In Charge of Dr. P. L. THIBAUT, Secretary, 141 Elk Place.

TWENTY-EIGHTH ANNUAL SESSION.

New Orleans, May 14, 15, 16, 1907.

OFFICERS—President, Dr. Henry Dickson Bruns, New Orleans; First Vice-President, Dr. Charles McVea, Baton Rouge; Second Vice-President, Dr. George F. Wilson, Bienville; Third Vice-President, Dr. A. J. Perkins, Lake Charles; Secretary, Dr. P. L. Thibaut, New Orleans; Treasurer, Dr. Jules Lazard, 830 Canal Street, New Orleans.

COUNCILLORS—Chairman, Dr. E. J. Graner, 2d Cong. Dist., New Orleans; Secretary, Dr. J. L. Scales, 4th Cong. Dist., Alden Bridge, La.; Dr. P. E. Archinard, 1st Cong. Dist., New Orleans; Dr. J. Wofford Sanders, 3d Cong. Dist., New Iberia, La.; Dr. S. L. White, 5th Cong. Dist., Ruston, La.; Dr. C. M. Sitman, 6th Cong. Dist., Greensburg, La.; Dr. C. A. Gardiner, 7th Cong. Dist., Sunset, La.

OFFICIAL PROGRAM.

FIRST DAY, TUESDAY, MAY 14.

Morning Session, 9:30 A. M. to 1 P. M.

Call to order by the President.

Invocation.

Address of welcome by Dr. John J. Archinard, President, Orleans Parish Medical Society.

Report of Committee on Arrangement.

Roll Call.

Reading of Minutes of 1906 Meeting.

Reports of Officers:

President.

Vice-Presidents.

Secretary.

Treasurer.

Report of Chairman of Council.

Report of other Councillors.

Dropping delinquent members from the roll.

Election of applicants from unorganized parishes.

Reading a list of component societies in good standing.

Report of Standing Committees:

On Scientific Work.

On Public Policy and Legislation.

On Publication.

Report of Special Committee:

Committee on Medical Education.

New Business.

Adjournment.

ENTERTAINMENT.

Buffet lunch to all members of the Society, by the New Orleans Polyclinic.

(Two blocks toward the Charity Hospital, then two blocks to the left.)

Afternoon Session, 2:30 to 5:30 P. M.

SECTION ON GENERAL MEDICINE.

Chairman: Dr. J. C. Willis, Shreveport.

Subject: *Diseases of the Heart*. To open discussion: Dr. J. B. Elliott, Jr., of New Orleans.

The Diagnosis of the Diseases of the Heart, by Dr. S. L. White, of Ruston.

Secondary Mitral Stenosis, by Dr. W. B. Pierce, of Lake Providence.

Heart Diseases in the Negro, by Dr. J. K. Sheppard, of Sligo.

General Arterio-Sclerosis, by Dr. C. Milo Brady, of New Orleans.

The Effect of Cigarette Smoking on the Heart of the Young, by Dr. John C. Calhoun, of Mansfield.

The Treatment of Pneumonia, Especially in Children, by Dr. John L. Scales, of Alden Bridge.

Syphilis, with Notes on Symptomatology and Treatment, by Dr. Louis G. LeBeuf, of New Orleans.

Diphtheria, by Dr. J. E. Knighton, of Homer.

Two Cases of Infective Arthritis and Pleurisy, Not Rheumatic, Not Gonorrheal, Not Tubercular, by Dr. E. M. Dupaquier, of New Orleans.

Malarial Hematuria, by Dr. O. M. Patterson, of Bastrop.

Chlorosis; Its Diagnosis and Treatment, by Dr. I. I. Lemann, of New Orleans.

Charlatanism, by Dr. L. Lazaro, of Washington.

SECTION ON DISEASES OF CHILDREN.

Chairman: Dr. J. S. Stephens, Jr., of Natchitoches.

Subject: *The Prevention and Treatment of Spasmodic Croup.*

To open discussion: Drs. Arthur Nolte, New Orleans, and Z. T. Gallion, Natchitoches.

Evening Session, 7:45.

The Importance of Physical and Psychical Therapeutic Methods, by Dr. W. S. Thayer, of Baltimore, Md.

The Value of Opsonins in the Treatment of Tuberculosis, by Dr. William E. Evans, of Chicago.

SECTION ON BACTERIOLOGY.

Chairman: Dr. J. D. Weis, New Orleans.

Subject: *A Practical View of Bacteriology for the Physician.*

To open discussion: Dr. F. H. Watson, New Orleans.

Opsonins and Vaccine Therapy, by Dr. C. C. Bass, New Orleans.

SECTION ON SANITARY SCIENCE AND QUARANTINE.

Chairman: Dr. J. N. Thomas, Quarantine.

A Memorial from the Louisiana Antituberculosis League to the Louisiana State Medical Society, by Dr. E. L. McGehee, Sr., of New Orleans.

Health Conditions at La Ceiba, Spanish Honduras, by Dr. C. Milo Brady, of New Orleans.

SECTION ON NEUROLOGY.

Chairman: Dr. R. M. Van Wart, New Orleans.

Subject: *Peripheral Nerve Injuries, Their Prognosis and Treatment.*

SECOND DAY, WEDNESDAY, MAY 15.

Morning Session, 9:30 A. M. to 1 P. M.

SECTION ON OTOTOLOGY.

Chairman: Dr. J. P. Leake, New Orleans.

Subject: *The Conservative Treatment of Runing Ears.* To open discussion: Dr. C. J. Landfried, of New Orleans.

SECTION ON OPHTHALMOLOGY.

Dr. Oscar Dowling, of Shreveport, will open this Section.

A New Method of Enucleation of Eyeball Under Local Anesthesia, by Dr. E. A. Robin, of New Orleans.

The Pathological Relation Between the Frontal Sinus and Affections of the Eye, by Dr. Homer Dupuy, of New Orleans.

SECTION ON SURGERY.

Chairman: Dr. E. Dunbar Newell, St. Joseph.

Subject: *What Class of Surgery Should the Country Doctor Do, and What Class Can He Afford to Neglect?* To open discussion: Drs. E. Denegre Martin, New Orleans, and T. E. Schumpert, Shreveport.

The Differential Diagnosis of the So-Called Chronic Rheumatisms, Illustrated, by Dr. E. S. Hatch, of New Orleans.

Arterial Varix of the Femoral Vessels Operated on By the Matas-Bickham Method, by Dr. H. B. Gessner, of New Orleans.

Remarks on Arterio-Venous Aneurism, by Dr. R. Matas, of New Orleans.

The Treatment of Coxitis, by Dr. P. A. McIlhenny, of New Orleans.

The Operative Treatment of Shoulder Dislocation Irreducible by Manipulation, by Dr. F. W. Parham, of New Orleans.

Fracture of the Patella, by Dr. J. M. Batchelor, of New Orleans.

Fracture, with Fibrous Union, Treated by Induced Pin-Callous, by Dr. William M. Perkins, of New Orleans.

The Value of Pin-Grafts, by Dr. William M. Perkins, of New Orleans.

Some Recent Experiences in the Surgery of the Kidney, by Dr. J. A. Danna, of New Orleans.

The Short Plaster Spica in the Treatment of Hip-Joint Disease, by Dr. J. F. Oechsner, of New Orleans.

SECTION ON ANATOMY AND PHYSIOLOGY.

Chairman: Dr. Wm. M. Perkins, New Orleans.

Subject: *On the Preservation of Anatomic Dissections, with Permanent Color of Muscles and Vessels; A Preliminary Note*, by Drs. Edmond Souchon and Marion Souchon, New Orleans.

[NOTE: This Section will be represented by a very interesting exhibit of anatomical dissections, preserved in natural colors, by the method recently elaborated by Professor Edmond Souchon and Dr. Marion Souchon, who will address the Society in regard to the exhibit.]

Observations on Anatomical Anomalies, by Dr. Henry Bayon, of New Orleans.

Further Observations on the Physiological Effects of the Waters of Hot Springs, Ark., by Dr. S. L. Martin, of Hot Springs, Ark.

SECTION ON MATERIA MEDICA AND THERAPEUTICS.

Chairman: Dr. C. J. Gremillion, Alexandria.

Subject: *The Hypodermic Treatment of Syphilis*. To open discussion: Drs. T. S. Dabney, New Orleans, and J. L. Wilson, Alexandria.

The Test Breakfast; Its True Diagnostic Value, by Dr. S. K. Simon, of New Orleans.

Test Diet in Conjunction with Examination of Feces, as a Means of Diagnosis, by Dr. J. Birney Guthrie, of New Orleans.

Some Things Which the General Practitioner Can and Should Do with the Stomach Tube, by Dr. J. T. Halsey, of New Orleans.

SECTION ON GENITO-URINARY DISEASES.

Chairman: Dr. Charles Chassaignac, New Orleans.

Subject: *Is Sexual Continence Compatible with Health?* To open discussion: Drs. Jules Lazard and Joseph Hume, New Orleans.

Removal of Hemorrhoids by the Angiotribe Method, by Dr. S. P. Delaup, of New Orleans.

SECTION ON DERMATOLOGY.

Chairman: Dr. Ralph Hopkins, New Orleans.

Subject: *The Diagnosis of Leprosy*. To open discussion: Dr. Isadore Dyer, of New Orleans.

ENTERTAINMENT.

The *registered* members will be entertained at lunch by the Faculty of Tulane University (Medical Department), at the College Building. (Floor above Meeting Hall).

Evening Session, 7:45.

(To which the Public is Invited.)

Annual Address by the President, Dr. Henry Dickson Bruns.

Address by the Annual Orator, Father Emanuel De Lamoriniere, S. J.

ENTERTAINMENT.

Immediately after the Evening Session a Trolley Ride will be given to West End in Special Cars to the Visiting Members and their Lady Friends. Bring your wives, daughters and sweethearts along.

THIRD DAY, THURSDAY, MAY 15.

Morning Session, 9:30 A. M. to 1 P. M.

SECTION ON OBSTETRICS AND GYNECOLOGY.

Chairman: Dr. R. W. Faulk, Monroe.

Subject: *Errors in Obstetrics and Gynecology.* To open discussion: Drs. S. M. D. Clark, New Orleans, and R. W. O'Donnell, Monroe.

The Present Status of the Question of Uterine Carcinoma, with Especial Reference to Its Early Diagnosis and Radical Treatment, by Dr. S. M. D. Clark, of New Orleans.

The Management of Abortion, by Dr. R. W. O'Donnell, of Monroe.

The Treatment of Extensive Cystocele and Uterine Prolapse, by Dr. C. Jeff. Miller, of New Orleans.

Anesthetics in Labor; Their Value to Both Physician and Mother, by Dr. A. C. King, of New Orleans.

SECTION ON X-RAY AND ELECTRO-THERAPEUTICS.

Chairman: Dr. N. F. Thiberge, New Orleans.

Subject: *Electricity as a Factor in Diagnosis and Treatment.* To open discussion: Drs. Gustav Keitz and Amédée Granger, New Orleans.

Further Report on the Treatment of Malignant Growths by the Massey Method of Electrical Sterilization, by Dr. Amédée Granger, of New Orleans.

The Skiagraph as an Aid in the Diagnosis of Tubercular Bone Lesions, with Illustrations and Report of Cases, by Dr. A. Jacoby, of New Orleans.

SECTION ON MEDICAL JURISPRUDENCE.

Chairman: Dr. E. M. Hummel, New Orleans.

Subject: *The Medico-Legal Aspects of Insanity.* To open discussion: Dr. L. L. Cazenavette, New Orleans.

SECTION ON MARITIME AND INLAND SANITATION. (Sub-Section.)

Chairman: Dr. Quitman Kohnke, Covington.

SECTION ON ORAL SURGERY.

Chairman: Dr. L. D. Archinard, New Orleans.

Subject: *Pre-Natal Influences in the Development and Diseases of the Teeth*, by Dr. Louis D. Archinard, of New Orleans. To open discussion: Dr. A. G. Friedrichs, of New Orleans.

Afternoon Session, 2:30 to 5:30 P. M.

Unfinished Business.

New Business.

Report of State Board of Medical Examiners.

Discussion on Legislative Matters.

ADJOURNMENT OF 1907 MEETING.

ENTERTAINMENT.

The *registered* visiting members will be entertained by the Orleans Parish Medical Society, at the Annual Banquet, at THE ATHENÆUM, corner of St. Charles Avenue and Clio Street. (*Take St. Charles Avenue or Jackson Avenue car on Canal Street, or at the corner of Canal and Baronne, and get out two blocks after passing Lee Monument.*)

IMPORTANT NOTICE.

The following regulation will be strictly enforced:

"SEC. 5. All papers read before the Society shall be its property. Each paper shall be deposited with the Secretary WHEN READ, and if this is not done, it shall not be published."

PARISH SOCIETY MEETINGS.

ASSUMPTION PARISH MEDICAL SOCIETY. At the Annual Meeting of this Society, held April 4, the following officers were elected: President, Dr. W. E. Kittredge, of Napoleonville; Vice-President, Dr. Henry C. Dansereau, Labadieville; Secretary-Treasurer, Dr. Adrian Landry, of Paincourtville.

THE BIENVILLE PARISH MEDICAL SOCIETY meet at Gibbs, La., on April 9, 1907.

Members present were Drs. F. M. Thornhill, S. I. Colvin, J. Atkinson, A. J. Pennington, T. H. Pennington, J. A. Neill, J. A. Joyner, J. N. Blume, H. L. Smith, C. C. Allums and A. B. Nelson.

Minutes of previous meeting read and adopted.

Dr. O. F. Mathews, of Caston, La., was elected a member of the Society.

The following motion was adopted by the Society: "That all members of the Bienville Parish Medical Society pay their dues at the January meeting of each year, and any member or members failing to pay dues by stated time, such member or members shall be considered as in arrears."

Dr. H. L. Smith read an excellent paper entitled "Puerperal Septicemia." After a very interesting discussion on above paper, Dr. J. Atkinson read a very fine paper entitled "Toxemias of Pregnancy." After a thorough discussion of this paper the Society adjourned for lunch.

The afternoon session was called at 1:30 by the president, Dr. S. I. Colvin.

The Society reaffirmed itself regarding the resolution, in which each member pledged himself not to examine for life insurance companies not paying a fee of \$5.00 for examinations.

A motion was adopted "that the papers of Drs. Smith and Atkinson be sent to the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL for publication."

Drs. Thornhill, Neill and Allums, as a committee, reported the following program for next Meeting:

Dr. O. O. Hamner on "*Acute Cerebro-Spinal Meningitis*"; Dr. H. L. Smith to open discussion.

Dr. A. J. Pennington on "*Differential Diagnosis of Intra and Extra Uterine Pregnancy*;" Dr. J. Atkinson to open discussion.

Dr. F. M. Thornhill on "*Diphtheria*"; Dr. T. H. Pennington to open discussion.

Dr. J. A. Neill on "*Dysentery*;" Dr. G. F. Wilson to open discussion.

Dr. O. F. Mathews, on "*Sub-Acute Endo-metritis, Including Sub-involution of Uterus*;" Dr. J. A. Joyner is to open discussion.

Dr. C. C. Allums on "*Malarial Hematuria*;" Dr. J. N. Blume to open discussion.

Bienville was chosen as the place for next meeting, and the Society adjourned to next regular meeting, July 9, 1907.

THE FRANKLIN PARISH MEDICAL SOCIETY met in regular session April 9, 1907, with the following members present: Drs. C. L. Guile, Dr. C. L. Ramage, Dr. J. A. McNair, Dr. W. H. Berry, Dr. W. A. Mecom, Dr. H. B. Womble, Dr. L. M. Griffin.

Dr. L. M. Griffin opened discussion by reading a very able paper on "*Quinin and Ergot as Oxytocics*." All the members present joined in general discussion.

The secretary was requested to extend an invitation to Dr. Campbell of Baskin to join the Society.

As there was no further business the Society adjourned to meet again in July. The next regular date.

H. B. WOMBLE, Sec.-Treas.

AT A MEETING OF THE BI-PARISH MEDICAL SOCIETY, held at Coushatta, La., Wednesday, April 3, 1907, the following members were present: Drs. W. W. Teer, J. T. Keator, J. A. Hendricks, C. E. Edgerton, W. A. Boylston, E. O. Edgerton, E. W. Breazeale and J. N. Brown.

Minutes of last meeting read and adopted.

The committee to confer with De Soto Parish Medical Society with a view of having it join the Bi-Parish Medical Society and thus convert the two societies into a tri-parish medical society, was granted more time, and to report at next meeting.

It was moved by Dr. C. E. Edgerton that the secretary confer with the State Medical Society, and if not contrary to its by-laws, to reinstate all delinquent members who will pay their dues for 1907.

It was moved by Dr. Edgerton that this society exclude from further membership any member who may have been elected a member who is not a registered physician.

Moved by Dr. C. E. Edgerton, that Drs. Keator and Teer and the health officers from the parish of Red River and Natchitoches be appointed as a committee to procure a list of all illegal practitioners of medicine in the two parishes and report same at the next meeting.

Moved by Dr. Hendricks, that Drs. U. G. Saunders and W. A. Boylston be made honorary members.

Moved by Dr. Keator, that the sum of \$25 be appropriated out of the funds to help defray the expenses of each meeting.

Moved by Dr. C. E. Edgerton, that a copy of the minutes of this meeting be sent to *The Medical Recorder* and NEW ORLEANS MEDICAL AND SURGICAL JOURNAL for publication.

Report of Cases:

Dr. C. E. Edgerton reported a *Case of Compound, Communitated Fracture of Tibia and Fibula of Both Legs with Perfect and Rapid Recovery.*

Dr. W. W. Teer reported a case of *Severe Laceration of Nose, in Child Being Hooked by Cow.*

Dr. E. W. Breazeale reported a case of *Mutilation of Scrotum, Both Testicles Completely Bared, with Prompt and Perfect Recovery.*

Dr. J. T. Keator reported on *Trephine for Fracture of Skull.*

Officers were elected as follows: Dr. J. T. Keator, president; Dr. W. W. Teer, first vice president; Dr. J. N. Brown, second vice president; Dr. E. W. Breazeale, secretary and treasurer.

Appointments for next meeting:

Surgery, papers by C. E. Edgerton and J. N. Brown; discussion by J. A. Hendricks and E. O. Edgerton.

Practice, papers by O. C. Teagle and W. W. Teer; discussion by W. T. Williams and W. A. Boylston.

Gynecology and Obstetrics, papers by W. A. Jones and J. B. Hargrove; discussion by Drs. Stephens and Young.

Meeting adjourned to convene at Natchitoches, La., Wednesday, December 4, 1907.

Medical News Items.

THE SIXTEENTH INTERNATIONAL CONGRESS is to meet at Budapest in 1909 and the Committee on Organization has been formed. Twenty-one sections are provided for and the date of opening is fixed for the 29th of August, the sessions being continued until the 4th of September. The address of the Secretary General is at VIII Esterhazy-utca, Budapest, Hungary.

THE FOURTEENTH INTERNATIONAL CONGRESS FOR HYGIENE AND DEMOGRAPHY meets in Berlin September 23-29, 1907. Scientific meetings are arranged to close at two o'clock in order that the afternoons may be spent in visiting the hygienic institutes of Berlin, of which more than one hundred are named.

THE UNITED STATES CIVIL SERVICE announces an examination on June 13 and 14, 1907, to secure eligibles for at least five vacancies as medical internes at the Government Hospital for the Insane at Washington, D. C., and in other branches of the services requiring similar qualifications. The stipend is \$600.00 per annum and the examination is open to all male citizens complying with the requirements. Applicants must be 20 years or over and must be graduates of reputable medical colleges. Applicants must apply to the Civil Service Commission or at any one of the places named for the examination. Louisiana examinations will be held at Baton Rouge and Shreveport and New Orleans. Any information may be had through the Secretary of the Civil Service Commission at these points.

REORGANIZATION OF TULANE MEDICAL DEPARTMENT. The Board of Administrators of the Paul Tulane Fund, on Friday, April 26, confirmed the rumors of a reorganization of the Undergraduate Medical Department by adopting a report submitted by a special committee appointed for this purpose. The committee's report was in substance as follows:

The committee finds it is not practicable to bring about a complete reorganization of the Medical Department for the session of 1907-08, for the reason that there must be constructed adequate laboratories for modern methods of instruction in physiology, anatomy, biology, pathology, etc, and neither these nor the para-

phernalia can be provided before October 1, 1908. Recommendations are, therefore, based on things to be done for the coming session of 1907-08, and for the succeeding session of 1908-09.

Drs. S. E. Chaillé, Ernest S. Lewis and John B. Elliott to retain their chairs until the end of the session of 1907-08.

Dr. Isadore Dyer to be Associate Dean of the Faculty, and to become Dean on Dr. Chaillé's retirement. He is also appointed Professor of Diseases of the Skin.

Dr. Edmond Souchon to pass to the Carnegie pension roll at the end of the present session; then to be appointed Emeritus Professor of Anatomy and Curator of Anatomical Museum, without salary.

Dr. Paul E. Archinard to be Professor of Diseases of the Nervous System.

Dr. John B. Elliott, Jr., to be Professor of Clinical Medicine.

Diseases of Children to be severed from Dr. Lewis' chair and divided into professorships on Orthopedic Surgery and Surgical Diseases of Children, with Dr. E. D. Fenner as Professor, and an associate professorship of Diseases of Children, with Dr. W. W. Butterworth as Associate Professor.

Dr. H. B. Gessner to be Associate Professor of Operative Surgery, taking effect July 1, 1907.

On Dr. Souchon's retirement his chair to be divided into a professorship of Anatomy and a professorship of Clinical Surgery, to be appointed later, the former to give his whole time to his duties, and not to practice.

Dr. Gordon King to be Associate Professor of Otology, Laryngology and Rhinology.

Dr. Henry Dickson Bruns to be Professor of Ophthalmology July 1, 1907, with same salary as newly-appointed professors.

At the end of 1907-08 session Chair of General and Clinical Obstetrics and Diseases of Women and Children be divided into one chair of gynecology and one chair of obstetrics.

At the end of session of 1907-08 Chair of Physiology, Hygiene and Pathological Anatomy be divided into one chair of physiology and one chair of pathology and pathological anatomy, and professors be named later.

After July 1, 1908, a Professor of Biology to be named for consolidated chairs of biology in Medical and Academic Departments; the schools of chemistry in Medical and Academic Departments to be consolidated and divided into appropriate divisions. First two years in medical course shall be taught on University campus.

Other recommendations in the report are:

If funds can be found dormitories will be constructed on the campus for medical students.

That the Board, at the end of the 1907-08 session, readjust salaries of professors and lecturers.

That it be the policy of the Board to appoint leading physicians from time to time as clinical lecturers.

That as soon as the Board is free to use the funds bequeathed by Mrs. Newcomb a medical department for women be established.

In conclusion the report says:

"We further recommend that this committee be continued, both for the purpose of examining and reporting on the voting power to be given to the professors and associate professors on the Medical Faculty, and for the purpose of continuing the negotiations, commenced by us, with the New Orleans College of Dentistry, seeking to incorporate that College into the Medical Department of the University."

FOLIA UROLOGICA. With Professor James Israel of Berlin as Editor-in-Chief, Professor A. Kollmann of Leipzig, Dr. G. Kulisch of Halle, and Dr. W. Tamms of Leipzig, as associate editors, and the other principal urologists of Europe as collaborators, these new international archives are announced by the house of W. Klinkhardt, Leipzig. Exhaustive original articles with colored plates and illustrations will be the principal feature of *Folia Urologica*. Contributions will be published in the four languages that are officially used in Congresses and each paper will be summarized in the three other languages. The new publication will contain a department entitled "Events in Urology" in which the regular collaborators will periodically report on the advances in this specialty, after having tested them critically in their respective services and laboratories. Finally *Folia Urologica* is to serve as a means of collecting the Annual Reports on urological work in hospitals,

clinics, etc., throughout the world. With a view to publishing contributions as quickly as possible, the issues of *Folia Urologica* will appear as often as required. Contributions from North, Central and South American authors may be sent to either of the American Editorial Representatives, William N. Wishard, M. D., Newton-Claypool Building, Indianapolis, Ind., or Ferd. C. Valentine, 171 West 71st Street, New York.

MEETING OF THE MISSISSIPPI STATE MEDICAL SOCIETY. The Mississippi State Medical Society met at Gulfport, in Mississippi, on April 9, 10, 11 and 12, 1907, under the preidsency of Dr. W. W. Crawford, of Hattiesburg. Dr. E. F. Howard, of Vicksburg, acted as Secretary instead of Dr. L. T. Fox, who was prevented from this office because of ill health.

The meeting was well attended, the registration being over 300, among whom were a number of guests. New Orleans was represented by Drs. F. W. Parham, E. D. Martin, Jno. F. Oechsner, E. D. Fenner, R. M. Van Wart, Amédée Granger, John Smyth, C. Jeff Miller, E. L. McGehee, C. C. Bass and Isadore Dyer.

The program was quite comprehensive, covering most of the subjects of medicine, but under the able and strict disposition of the Chair the program was completed on schedule time. On Friday, April 12, the House of Delegates held its last meeting and elected the following officers: Dr. R. S. Curry, of Columbus, President, and Dr. E. F. Howard, of Vicksburg, Secretary.

Resolutions were adopted during the meeting recommending to the State Legislature that hereafter the state examination for medical license should require graduation from one of the recognized medical schools instead of the former practice of permitting anyone to practice medicine in Mississippi who had passed the state examination. The personnel of the State Board of Health was changed, Dr. J. Y. Hunter retiring from the presidency after a number of years of service in this capacity. The new Board of Health will be constituted as follows: Dr. J. J. Williams, Ellisville; Dr. E. A. Cheek, Arcola; Dr. G. S. Bryan, Armory; Dr. John Barrington, Yazoo City; Dr. L. G. Dickinson, McComb City.

OSLER'S MODERN MEDICINE is the title of a forthcoming publication by Messrs. Lea. Bros. & Co., of Philadelphia, under the

editorship of Dr. William Osler. It is to appear in seven octavo volumes and covers the entire field of medicine. The contributors are representative of the profession in the United States and Canada, and also include several noted men in Great Britain. The early appearance of the first volume is announced.

THE FIRST CONGRESS OF THE GERMAN SOCIETY FOR UROLOGY will be held in Vienna October 2 to 5, 1907. A preliminary program is announced and physicians generally are invited to attend. Dr. F. Lowenhardt, Karlstrasse, Breslau, Germany, may be addressed for further information.

HOW THE EARNINGS OF THE "JOURNAL" SHOULD BE EXPENDED. In his presidential address before the Medical Society of the State of New York, in January of this year, Dr. Joseph D. Bryant, president-elect of the American Medical Association, referring to the prospective profits of the *Journal*, said: "I am, however, clearly of the opinion that the net earnings of the *Journal* should be utilized for its betterment, and for the purpose of extending, when feasible, publication courtesies to such of those as contribute to its pages important and original articles. It should not be the policy of this Society, in my judgment, to accumulate worldly belongings, but instead to increase the wealth of good fellowship and professional advice, by a wise adjustment relating thereto, of its business management."—*Exchange*.

STATE MEDICAL COLLEGE FOR OKLAHOMA CITY. A Charter has been granted to a new regular medical college in Oklahoma City with the title of the Oklahoma State Medical College. The incorporators include Dr. W. J. Darnell of Mountain View, Okla., who has been made President of the school; Dr. West Moreland, Atlanta, Ga., Dr. H. H. Baty, of Rome, Ga.; Dr. J. R. Phelan, of Oklahoma City, Secretary of the corporation, and J. P. Eckers, of Oklahoma City.

THE TENTH ANNUAL MEETING OF THE AMERICAN GASTRO-ENTEROLOGICAL ASSOCIATION is to be held at Atlantic City June 3 and 4, 1907. The preliminary program offers an interesting list of contributors.

MCGILL UNIVERSITY MEDICAL SCHOOL. The medical course at McGill University, Montreal, has been lengthened by a year,

and five years of study are now requisite to obtain the degree of M. D. from that faculty.

ENJOINED FROM PRACTICING MEDICINE. On a petition of Dr. A. F. Barrow, President of the State Board of Medical Examiners, J. A. Barnes was enjoined, under an order issued by Judge King, from practicing medicine in any of its departments in this State until he shall have obtained the certificate required under the Louisiana law showing that he has passed an examination before the Board of Medical Examiners as to his qualifications and fitness.

GRADUATE NURSES AT TOURO INFIRMARY. Seven young ladies received their certificates as graduate nurses at the Touro Infirmary On April 1. This number completed their two year course with great credit to themselves. Those receiving diplomas and medals were as follows: Misses Lucy B. Carroll, Clare Pardue Hindmann, Marie E. Moore, De Witt C. Dillard, Emily A. O'Connor, Helen E. Derby and Eva A. Roman.

LOUISIANA STATE MEDICAL SOCIETY WILL HOLD ITS ANNUAL MEETING AT NEW ORLEANS on May 13, 14, 15 and 16, 1907. Dr. P. L. Thibaut, Secretary.

STATE BOARD OF MEDICAL EXAMINERS' NEXT MEETING. The next meeting of the State Board of Medical Examiners will take place on May 9 and 10, 1907.

THE NEW ORLEANS COLLEGE OF DENTISTRY, through its Dean, Dr. A. G. Friedrichs, has offered to examine and treat free of charge the teeth of the children in the public schools of this city.

GRADUATES FROM MISSISSIPPI MEDICAL COLLEGE AT MERIDIAN numbered 22. This is its first year.

THE PATHOLOGICAL SOCIETY OF PHILADELPHIA, which is one of the oldest, if not the oldest Society, of its kind on this Continent, will celebrate its Semicentennial in May, 1907.

The celebration, which may rightly be considered an event of national importance, will extend over two days, Friday, May 10, and Saturday, May 11, 1907. On the first day addresses will be delivered by Dr. Frederick G. Novy, of Ann Arbor, Michigan, on

"The Role of Protozoa in Pathology;" by Dr. Simon Flexner, of the Rockefeller Institute, New York, on "The Newer Pathology;" and, by Dr. A. E. Taylor, of the University of California, on "The Dynamic Point of View in Pathology."

In the afternoon, at four o'clock, a commemorative meeting will be held in the Pennsylvania Hospital, where the first meetings of the Society, in 1857, took place. At this meeting, Dr. William Osler, Regius Professor of Medicine, Oxford University, will deliver an address on "Pathology and Practice."

At a dinner in the evening, prominent men from all parts of the country will respond to toasts.

An exhibition meeting of interest to pathologists, clinicians, and surgeons will be held on Saturday, May 11.

The date of the celebration will enable those to be present who have been in attendance upon the Congress in Washington, and those who are coming east a little in advance of the meeting of the American Medical Association.

THE ORLEANS PARISH MEDICAL SOCIETY has inaugurated a Circulating Library, which will be governed by the following Rules:

1. A deposit of Five Dollars will be exacted, to guarantee the safe return of the book.

2. The time-limit for the possession of the borrowed volume to extend from 4 P. M. to 10 A. M. the following day, also from Saturday at 4 P. M., to Monday, at 10 A. M. Books may be left over on legal holidays, the same as on Sundays.

3. Any member keeping a book overtime shall be fined ten cents for the first hour or fraction thereof, and three cents for each additional hour or fraction thereof.

4. The fine to be deducted from the deposit.

5. Members agree to replace the borrowed volume, should it be mutilated, destroyed or lost.

6. These resolutions do not include unbound current medical journals.

N. B. On meeting nights, the Library closes at 4 P. M.

PRACTICAL FEVER NURSING is the title of a publication to be issued soon by Messrs. W. B. Saunders & Co., written by Dr. Ed-

ward C. Register, well-known as the Editor of the *Charlotte Medical Journal*.

THE CONGRESS OF PHYSICIANS AND SURGEONS will meet in Washington with headquarters at the Arlington Hotel on May 7, and days following. The academic character of the membership of this Congress always makes its meetings interesting and important. It is constituted of the component national association on general and allied medical and surgical branches, the requirement for membership in which is of high standard. New Orleans numbers a few of its medical profession in the membership of the several associations, viz.: Surgical Association, Drs. Souchon, Matas and Parham; Ophthalmological Association, Dr. Bruns; Dermatological Association, Dr. Dyer; and Laryngological Association, Drs. DeRoaldes and King. In naming Dr. A. W. DeRoaldes last we purposefully desired to emphasize his membership which has been in force for many years, and, more than this, because at the coming meeting he occupies the distinguished position of President of the American Laryngological Association and intends to occupy the Chair during the several sessions of this body at the meeting announced above, at which Dr. King will also be present.

PERSONALS: Dr. J. N. Thomas, former Quarantine Officer at the Mississippi River Quarantine Station, has accepted a high position offered by Surgeon General Wyman to do quarantine work in connection with Mexican, South and Central American ports. Dr. Thomas will be succeeded at the lower station by Dr. Von Esdorf.

Dr. J. Hope Lamb has taken possession of the residence he has leased in Robert street. Dr. Lamb has only recently arrived from Quarantine Station, where he has been for a number of years, and will reside permanently here and will resume his practice.

Dr. G. F. Patton gave an address on Tuberculosis before the New Orleans Educational Association during the past month.

Dr. A. C. Hundley of Crowley has been appointed special health officer.

Dr. W. W. Scales of Mobile, Ala., has been appointed an assistant surgeon in the Public Health and Marine Hospital Service and will serve at Colon.

REMOVALS: Dr. A. J. Newman has moved from Hillsdale, La., to Queensbay. Dr. E. O. Powers has changed his location from Grangeville, La., to Baton Rouge. Dr. E. E. Dickason has gone to Ojuela, Mapimi, Durango, Mexico, from New Roads, La.

VISITORS TO NEW ORLEANS DURING THE PAST MONTH. Dr. N. P. Knoblock, of Gibson, La. Dr. F. Girard of Lafayette, La.

MARRIED: Dr. George W. Robinson, on March 20, to Miss Lucille Kerley. Dr. and Mrs. Robinson will spend their honeymoon in New York.

DIED: At Mobile, Ala., on April 12, Maximillian Ferdinand Grosart, aged 52 years, a native of New Orleans.

On Monday, April 1, 1907, Belle Leake, wife of Dr. John P. Leake of this city.

On April 7, Theodore D. Buhl, President of Parke-Davis & Co.

The death of Professor Berthelot, of Paris, occurred in Paris on March 18. He had reached the age of 80 years. Professor Berthelot was one of France's most renowned savants, and in the popular estimation he was best known for his researches in the synthesis of organic compounds. He had been perpetual secretary of the Academy of Sciences since 1889. He was a life member of the Senate of France and served at different times as Minister of Public Instruction and Minister of Foreign Affairs.

Book Reviews and Notices.

All new publications sent to the JOURNAL will be appreciated and will invariably be promptly acknowledged under the heading of "Publications Received." While it will be the aim of the JOURNAL to review as many of the works received as possible, the editors will be guided by the space available and the merit of the respective publications. The acceptance of a book impiles no obligation to review.

A Treatise on Surgery, by GEORGE RYERSON FOWLER, M. D. W. B. Saunders & Co., Philadelphia and London, 1906.

This splendid work in two volumes, by one of the most thorough and well known of American surgeons was, fortunately for surgery, finished before its gifted author fell a victim to an attack of gangrenous appen-

dicitis. The writer of this review had the pleasure of talking with him at the Portland meeting of the American Medical Association about his work on surgery, and so it was with much anticipation of pleasure and instruction that its coming was awaited. We were not disappointed. It is a comprehensive, thoroughly practical work on surgery, well adapted to the needs of the student and practitioner. It has omitted little of value, and has included even the latest procedures in surgery. The style is agreeable, the descriptions concise but clear, and the illustrations very helpful. We can cordially commend it as a text-book of surgery.

PARHAM.

Cleft Palate and Hare Lip.—The Operative Treatment of Fractures. By W. ARBUTHNOT LANE, Surgeon to Guy's Hospital, London. The Medical Publishing Co., Limited, London, 1905 and 1906.

These well illustrated treatises describe procedures practiced with success by the author. He has for thirteen years resorted to the open treatment of all fractures not readily reducible by manipulation.

The Practical Medicine Series, Edited by GUSTAVUS P. HEAD, M. D. Vol. II. General Surgery, Edited by JOHN B. MURPHY, M. D. Series 1906. The Year Book Publishers, Chicago.

This volume we have reviewed from year to year and found it always up to date and one of the most readable of books. The literature is reviewed with sufficient thoroughness, having always the end in view, not to review everything found in the current literature, but to select those articles really of value and to abstract them at sufficient length to give the reader an adequate idea of the subject matter of the articles.

No year-book or annual review has proven of greater value than this.

PARHAM.

Appendicitis, by JOHN B. DEAVER, M. D. P. Blakiston's Son & Co., Philadelphia, 1905.

This masterly work of Deaver's has greatly improved with each edition, until this third edition may be characterized as one of the most valuable of our treatises on this much-written-about topic. No surgeon ought to be without this work, and it should prove of the greatest value to the general practitioner who first sees the cases of appendicitis and often determines the question of the death or survival of the individual so affected.

PARHAM.

Surgical Aspects of Digestive Disorders. By JAMES G. MUMFORD, M. D., in association with ARTHUR K. STONE, M. D. The Macmillan Company, New York, 1905.

This book has been written by a surgeon and internist, in collaboration, approaching the subject from different, but not opposing, points of view. The product is an exceedingly interesting and valuable treatise on the digestive organs, below the esophagus. The book is addressed to both surgeons and general practitioners, and ought to prove of the greatest value to both. It shows very clearly that the provinces of the surgeon and the internist so overlap in this department of clinical medicine, that they must needs work out their diagnosis in consultation. The book ought to be of great assistance in bringing earlier to operation the operable cases of affections of the digestive apparatus.

PARHAM.

A Manual of Otology. By GORHAM BACON, M. D. Lea Brothers & Co.

This is the fourth edition of what has become a classic among text-books on otology. The revision has been thorough, and brings the work quite up to the latest modern ideas on this subject, and comprises an increase of about forty pages over the last edition, with several new plates and illustrations. An important appendix has been added treating of the very interesting subject of the examination of pus, the making of cultures and physiological inoculations relative to the treatment of ear suppurations.

DE R. & K.

Manual of Diseases of the Ear, Nose and Throat. By JOHN JOHNSON KYLE, B. S., M. D. P. Blakiston's Son & Co., Philadelphia.

The most valuable feature of this manual is the comprehensive treatment of the subjects of anatomy and physiology of the special organs, and the technic and therapy in the treatment of their diseases. For the hard pressed student and the busy general practitioner much valuable and concise information can be obtained by consulting this volume. For the debutant specialist it serves as an excellent introduction to the necessarily more profound study of this branch of medicine.

DE R. & K.

Nasal Sinus Surgery with Operations on Nose and Throat. By BEAMAN DOUGLASS, M. D. F. A. Davis Co., Philadelphia.

This is one of the most instructive and attractive publications of the past year, and illuminates a subject which, to the student of rhinology and laryngology, is always one requiring long clinical experience and close study to master in all its details. The first chapter is devoted to a general review of the anatomy of the nose, and then a chapter each to the anatomy and surgery of the accessory cavities of the nose. Then follow detailed descriptions of the operations practiced on the nasal septum, turbinates, the external nose, the pharynx, larynx and trachea. The text is profusely illustrated, and is clear and concise in descriptions. The author is to be commended for his worthy production.

DE R. & K.

Medical Guide and Monograph Series. Golden Rules of Pediatrics, etc.

By JOHN ZAHORSKY, A. B., M. D. with an introduction by E. W. SAUNDERS, M. D. The C. V. Mosby Medical Book Co., St. Louis, 1906.

In the preface to this book the author calls attention to the effectiveness of teaching the essential truths of medical science by aphorisms, and states that at no time was this method more necessary than to-day. The modern spirit of investigation has made the art of pediatrics depend on so many scientific enquiries it is essential to state practical points in a concise form. Such methods create strong impressions on the mind and will often save the reader the time spent in getting at facts buried in elaborate text-books. The book consists of 360 pages, is well arranged, and will repay the practitioner who gives it a careful reading.

MILLER.

Publications Received.

W. T. Keener & Co., Chicago, 1907.

Tumors Innocent and Malignant, by J. Bland Sutton, F. R. C. S. 4th Edition.

J. B. Lippincott & Co., Philadelphia, London and Montreal, 1907.

Catalogue of Medical and Surgical Publications.
International Clinics. Vol. I. 17th Series.

G. P. Putnam's Sons, New York and London, 1907.

Alcohol. The Sanction for Its Use Scientifically Established and Popularly Expounded by a Physiologist. Translated from the German by J. Starke, M. D.

P. Blakiston's Son & Co., Philadelphia, 1907.

Surgical Diseases of the Chest, by Carl Beck, M. D.

Biographic Clinics, Vols. IV and V. By George M. Gould, M. D.

Anatomical Terminology with Special Reference to the B. N. A., by Lewellys F. Barker.

Medical Diagnosis, by Charles Lyman Greene, M. D.

Quiz Compend. A Compend on Bacteriology Including Animal Parasites, by Robert L. Pitfield, M. D.

Lea Bros. & Co., Philadelphia and New York, 1907.

A Manual of Obstetrics, by A. F. A. King, A. M., M. D., LL. D. 10th Edition.

A Text-Book of the Practice of Medicine for Students and Practitioners, by Hobart Amory Hare, M. D. 2d Edition.

Progressive Medicine. Hare-Landis. Vol. IX. No. 1. March 1, 1907.

Medical Epitome Series. Diseases of the Ear, Nose and Throat, by J. Bruce Ferguson. Edited by Pederson.

F. A. Davis Co., Philadelphia, 1907.

Psychology Applied to Medicine, by David W. Wells, M. D.

Miscellaneous.

The Kingdom of God, by Rev. E. E. Hale.

What Unitarian Parents Can Teach Their Children, by Chas. W. Eliot.

Twenty-third Annual Report of the Kensington Hospital for Women.

Fourth Annual Report of the Committee on the Prevention of Tuberculosis of the Charity Organization Society of New York City.

Annual Report of the Surgeon General of the Public Health and Marine Hospital of the United States for the Fiscal Year 1906.

Report of the Department of Health of the Isthmian Canal Commission for the Month of December, 1906. Col. W. C. Gorgas, M. D. (Gov. Print. Office. Wash., D. C., 1907.)

The Chautauqua Quarterly, January 1907.

Annals of Otolaryngology and Laryngology, by Jonas H. Parker, St. Louis.

Manual of Clinical Chemistry, by A. E. Austin, A. B., M. D. (D. C. Heath & Co., Boston, 1907.)

An Account of the Library of the College of Physicians of Philadelphia, 1788 to 1906.

Annual Report of Library Committee of the College of Physicians of Philadelphia for the Year 1906.

Thirty-third Annual Report of the Medical Director of Cincinnati Sanitarium for the Year Ending November 30, 1906.

Heaven and the World of Spirits and Hell From Things Heard and Seen, by Emanuel Swedenborg.

Paraffin in Surgery, by Dr. Wm. Luckett and Dr. Frank I. Horn. (Surgery Publishing Co., New York, 1907.)

The Johns Hopkins Reports. Studies in Urological Surgery. Vols. XIII and XIV.

Tuberculosis as a Disease of the Masses and How to Combat It. (4th Issue Revised and Illustrated.) Prize Essay by S. A. Knopf, M. D. (Published by Fred P. Flori, No. 514 E. 82d St., New York.)

Reprints.

Remarks on the Modern Treatment of the Toxemia of Pregnancy, by Dr. John F. Winn.

The Treatment of Cystitis, by Dr. John S. Peterkin.

The Cure of Psoriasis, With a Study of 500 Cases of the Disease, Observed in Private Practice, by Dr. L. Duncan Bulkley.

Trypsin In Cancer—A Preliminary Statement, by Dr. Wm. S. Bainbridge.

The Cervix Uteri Before, During and After Labor; (2) Fibroma Molluscum; (3) Success The Surgical Desideratum, by A. Ernest Galant, M. D.

A Review of the Opsonins and Bacterial Vaccines, by E. M. Houghton, M. D.

Fibroid Tumors of the Uterus, by Charles P. Noble.

Diagnosis and Treatment of Some of the Ordinary Diseases of the Rectum; (2) Medical Specialism, with Especial Reference to Proctology, by Dr. Lewis H. Adler, Jr.

Mr. Elbert Hubbard on Vaccination; A Critical Examination.

The Scope of the Official Medical Journal, by Chas. Wood Fassett, M. D.

MORTUARY REPORT OF NEW ORLEANS.

(Computed from the Monthly Report of the Board of Health of the City of New Orleans.)
FOR MARCH, 1907.

CAUSE.	White.	Colored.	Total.
Typhoid Fever.....	3	2	5
Intermittent Fever (Malarial Cachexia)	1	2	2
Smallpox.....	1	3	4
Measles.....	10	6	16
Scarlet Fever.....	2	2	2
Whooping Cough.....	2	1	3
Diphtheria and Croup.....	1	1	1
Influenza.....	8	13	21
Cholera Nostras.....			
Pyemia and Septicemia			
Tuberculosis.....	43	42	85
Cancer.....	22	3	25
Rheumatism and Gout	2	2	2
Diabetes.....	1	1	1
Alcoholism.....	2	1	3
Encephalitis and Meningitis.....	11	3	14
Locomotor Ataxia.....			
Congestion, Hemorrhage and Softening of Brain.....	19	3	22
Paralysis.....	3	1	4
Convulsions of Infants	6	4	10
Other Diseases of Infancy	21	11	32
Tetanus.....	2	7	9
Other Nervous Diseases	1	1	2
Heart Diseases.....	41	33	74
Bronchitis.....	9	6	15
Pneumonia and Broncho-Pneumonia.....	47	42	89
Other Respiratory Diseases.....	3	5	8
Ulcer of Stomach.....	1	1	1
Other Diseases of the Stomach	5	3	8
Diarrhea, Dysentery and Enteritis.....	25	12	37
Hernia, Intestinal Obstruction.....	4	1	5
Cirrhosis of Liver.....	8	3	11
Other Diseases of the Liver	2	1	3
Simple Peritonitis	2	2	4
Appendicitis.....	5	1	6
Bright's Disease	22	15	37
Other Genito-Urinary Diseases.....	4	7	11
Puerperal Diseases	3	1	4
Senile Debility.....	13	7	20
Suicide.....	6	1	7
Injuries.....	22	10	32
All Other Causes.....	16	5	21
TOTAL.....	397	259	656

Still-born Children—White, 22; colored, 21; total, 43.

Population of City (estimated)—White, 251,000; colored, 90,000; total, 341,000.

Death Rate per 1000 per annum for Month—White, 18.98; colored, 34.53; total, 23.08.

METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmospheric pressure.....30.11
 Mean temperature.....71.
 Total precipitation.....2.31 inches.
 Prevailing direction of wind, south.

New Orleans Medical and Surgical Journal.

VOL. LX.

JUNE, 1907.

No. 12

Original Articles.

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. A complimentary edition of one hundred reprints of his article will be furnished each contributor should he so desire. Covers for same, or any number of reprints, may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

The Annual Report of 1907 to Edwin Boone Craighead,
A. M., LL. D., President of the Tulane University
of Louisiana, at the Annual Commencement of
the Medical Department, May 8, 1907.

By PROF. STANFORD E. CHAILLE, A. M., M. D., LL. D., Dean of the Medical
Department New Orleans, La.

MR. PRESIDENT—During the seventy-three years that have elapsed since the origin of the Medical Department it has graduated 4,013 doctors of medicine and 380 masters of pharmacy.

Since the commencement of 1906, action has been taken in several matters of importance to the future welfare of the Medical Department that deserve special record.

August 13, 1906, the Tulane University gained possession of the New Orleans Polyclinic, constituted it the Postgraduate Med-

ical Department of the University, and thereby strengthened the cause of medical education in the University.

October 25, 1906, the University adopted a regulation establishing, after June 30, 1907, sixty-five years as the age limit for the retirement of every salaried teacher and officer, unless retained by special order of the Board of Administrators.

January 26, 1907, the Supervisors of the Louisiana State University [at Baton Rouge], resolved to establish a Medical Department in New Orleans. The United States now has about 160 medical colleges, far more than has any other civilized country, and at least one hundred more than requisite to the welfare of medical education and of the medical profession. For, probably not less than one hundred of these colleges, depending wholly on students' fees for their maintenance, are compelled, in order to gain students, to execute such inadequate regulations for admission that many of their students are grossly deficient in education, and to execute so inefficiently their requirements for graduation that many ignorant and idle students readily pass their examinations, and thus gain entrance to the medical profession to its great detriment. Farther, in order to attract students, they are charged with such inadequate fees that it becomes impossible for these cheap-man colleges to provide the many expensive laboratories and other educational advantages now indispensable to medical education.

A new and efficient medical college cannot be established and maintained in New Orleans, unless financially aided by the State. Even if thus rendered comparatively efficient, this efficiency would be gained, as far as concerns the highly important educational advantages of the Charity Hospital, at the serious expense of the existing medical college. Hence, another medical college in New Orleans will be injurious to the cause of medical education and to the best interests of the medical profession. While self-interest does and should guide every one, yet it is manifest that the self-interest of one should not trespass on that of another and that the interests of a few should not trespass on those of the public. It is unquestionable that the self-interest of the few engaged in establishing a new medical college in New Orleans will surely trespass on the well being of the Tulane Medical Department, on the

cause of medical education, on the improvement of the medical profession, and on the welfare of the public, and it is very greatly regretted that most of those engaged in this trespass are professional sons of our own Medical Department. As every thoughtful man finds his own greatest enemy within himself so the medical profession finds its greatest enemy within its own ranks.

During the session now closing 543 students were registered, 47 more than ever attended any previous session, and the revenue for the present collegiate year considerably exceeds that of any previous year.

The students admitted for the first time were better educated than ever before; the duration of the session was longer, two new studies of importance, clinical microscopy and tropical medicine, were added to the curriculum of studies; the number of clinical classes was increased and no previous year was distinguished by greater fidelity and efficiency of the teachers. An indisputable proof of the greater requirements demanded for graduation is presented in the facts that there were 516 medical students, that of these 128 were eligible for graduation, and yet the number of medical graduates is only 91.

For the reasons just stated, the session of 1906-7 has been much the most efficient and the most prosperous in the 73 years' history of the Medical Department.

Progress is dependent on attending conditions, these conditions as to education in the Medical Department have improved year by year and especially since 1893, and the improvement of education has notably progressed, year by year, as rapidly as the conditions justified. The probabilities are great that conditions will greatly improve in the future and thus promote to ever increasing extent the educational progress of the Medical Department and its notable superiority in the South.

GRADUATES OF 1907—In behalf of your faculty I cordially congratulate you on the acquisition this day, after years of arduous labors, of the diplomas that entitle you to commence the practice of your professions.

The practice of medicine is notable among other occupations for the exceptional legal power given every physician to decide, for those who employ him, questions of life and death and there-

fore notable for the responsibility thus imposed; notable for the responsibility of every practitioner as a protector of the public health; notable for the great amount of special knowledge, of physical and moral courage, of tact, sympathy and charity required; notable for the temptations and for the anxiety and worry imposed on every practitioner and notable for the numerous moral questions that demand decision.

While sound morals and good intentions will readily color most of these questions, yet some will at times occur when doubts will perplex you and when you would welcome wise advices in order to aid you in such cases. You will find accompanying the diploma of every one of you a copy of the "Principles of Medical Ethics" of the American Medical Association. Therein are instructions as to "the duties of physicians to their patients," "to each other and to the profession at large" and "the duties of the profession to the public." Every one of you is strenuously urged to familiarize himself with these principles of ethics and to adhere to them as his guide to professional conduct.

The copy presented to you contains also the specification of seven reasons why every physician should become a member of his parish or county medical society; to these convincing reasons the attention of every one of you is specially solicited and you are earnestly advised to become, as soon as you return home, a member of your local society, thereby testifying promptly to your determination to aid in promoting the welfare of your profession, of the public and thereby of yourself.

As no previous graduates have excelled you in good conduct and as no class has surpassed yours in educational attainments, it is with sanguine hopes for the happiness and success of every one of you that your faculty now regretfully bids you its official farewell.

Louisiana State Medical Society Proceedings.

(EDITED BY PUBLICATION COMMITTEE).

P. L. Thibaut, M. D., Chairman.

1906 MEETING.

The Venereal Peril and Public Apathy.

By A. NELKEN, M. D.

I take it that it is wholly unnecessary to maintain in a medical body the dangers of venereal infections.

The efforts of Ricord, Nögerath, Buckley, Morrow, Weis, and others too numerous to mention, have served to arouse the medical profession to a proper appreciation of the gravity of the subject.

But a most lamentable ignorance still pervades the mass of society as to its perils, and where ignorance does not exist, a false sense of modesty has prevented, in the recent past, any general effort to deal with the problem.

Let a case of leprosy be unearthed and immediately the panic-stricken community is up in arms. Yet leprosy is a disease of comparative rarity, and its contagiousness is denied by some authorities.

A few suspicious cases of yellow fever are discovered and at once the business of a large city is paralyzed by inflexible quarantines.

And where leprosy or yellow fever attacks one, the venereal infections—diseases which are communicable only through actual contact, and which we know are unnecessary and absolutely preventable—claim their tens of thousands, demanding tribute in disability and death from guilty and innocent alike, and sparing neither the hovel of the pauper nor the palace of the millionaire.

I think it no exaggeration to say that at least 90 per cent of all men past 50 have suffered at some time from some sort of venereal disease. About 50 per cent of this number have permanent changes in their organs as a result of infection, and possibly 10 per cent of these suffer from some form of disability for the remainder of their lives.

Much has been said and written within the last few years upon what is popularly known as race suicide. According to Neisser about 50 per cent of all involuntarily childless marriages is due to gonorrhea. Seventy-five per cent would be nearer correct.

Let us but add to this the number of miscarriages and premature deaths due to infection of the wife or child with syphilis, and we see at once that race suicide is not only a moral but a most important sanitary problem.

The fountain head from which flows the stream of infection which has polluted the lives of untold millions of men, women and children, is prostitution. The three-headed Cerberus, fit emblem of the venereal trinity, now keeps his station at the entrance to the brothel. If there were no illicit sexual relations venereal disease would soon die out for want of fresh material upon which to feed.

But prostitution, like poverty, is coincident with civilization.

Krafft-Ebing says that man is normally polygamous. And the customs and requirements of society have placed the marrying age at a period long after the awakening of the sexual appetite. Prostitution is the solution offered in this conflict between the laws of Nature and the demands of society.

"It is a mere absurdity," says Sanger, "to assert that prostitution can ever be eradicated. The whole power of the church, where it possessed not merely a spiritual but a secular arm has been in vain directed against it. Nature defies the mandates of the clergy and the threatened punishments of an after-life were futile to deter men from seeking, and women from granting, sinful pleasures in this world."

"The guilty woman has been banished, scourged, branded, executed, held up to public opinion as immoral; their partners have been subjected to the same punishments, have been denuded of their civil rights, have seen their offenses visited upon their families, have been led to the stake, the gibbet and the block—and still prostitution exists."

Scarcely more successful have been the efforts made to temper what at length has come to be recognized as an irradicable evil.

Segregation and licensing is of ancient origin. The former was found to be impracticable and the latter has had to give way to sen-

timental opposition, which refused to receive tribute from the earnings of immorality.

Frequent compulsory examinations of prostitutes came into vogue with more enlightened knowledge of the nature and causes of venereal infections. Tried only superficially in this country, where public sentiment will not sanction any official recognition of vice, such examinations have long been carried out in many of the cities of Continental Europe, notably in St. Petersburg, Berlin and Paris.

The unprejudiced observer must acknowledge that these examinations, no matter how plausible in theory, have proven valueless in practice. In St. Petersburg, according to Tschikhajiff, 73 per cent of venereal diseases could be traced directly to prostitution. According to Sperk, 12 per cent of the inhabitants of Berlin are syphilitic, and according to Le Noir and Fournier, 18 per cent of those of Paris are similarly afflicted.

In order to be convinced of the futility of compulsory examination as carried out in practice, it is but necessary to read Griffith's account of his personal observations of the system at Paris. Four hundred women, he says, have been examined in one and half hours. The diagnosis of gonorrhea is seldom made! Syphilis and the grosser manifestations of chancroid and simple ulcer, with its complications, are chiefly sought for, and the women are expert in concealing even syphilitic lesions by the clever application of cosmetics.

Even if the system were all that it should be, still it would not reach that chief disseminator of venereal diseases, the clandestine or amateur prostitute, she who does not come into the official dragnet. I use the term "amateur" advisedly, as opposed to the professional prostitute, whom experience has made more or less proficient in treating and especially in avoiding venereal infection.

Mankind is surely, although very slowly, growing moral. A glance over the pages of history should convince the doubter. The modern David is no saint, but an adulterer, and a murderer. The Saturnalia and Feasts of Vesta are unpleasant memories of a dead civilization; no modern Theodora queens it over the civilized world; no Borgia sits upon the Throne of St. Peter; no Pompadour sways the destinies of Europe. But we are yet an immeasurable distance removed from that millenium where virtue shall not only be generally preached, but universally practised. And until that time

shall have arrived, the venereal plague will be one of the problems with which the sanitarian must wrestle.

It is but a platitude to say that fore-warning is fore-arming. It is the physician's duty to teach the public the real dangers of venereal infections.

Where does our youth get his education on sexual subjects when the approach of puberty first directs his attention to his reproductive organs? Not from those best calculated to instruct him, the father, who has learned the perils of illicit relations in the sad school of experience, nor from the physician, whose calling teaches him the dangerous pitfalls which beset the path of the unwary.

But his teachers are the older boys in the streets, or in those hot-beds of vicious instruction, the boarding schools. Perverted methods of sexual gratification are taught him, he reads eagerly obscene literature, gloats over obscene pictures, attends obscene plays, and at a time when his sexual appetite is most impressionable, never a word is said to him of the disease and death that may lurk in its gratification. Is it surprising that with so many men (as Lydston says) their sexual organs are the axes around which their lives revolve?

Children study physiology at school and one-third of the books is devoted to the dangers of alcohol. That they have excretory organs other than the lungs and skin is barely suggested. No reference is made to the sexual organs and neither at home or at school are they told anything but fairy tales to explain the mystery of conception and birth.

Even the newspapers, with moral standards all too low, avoid in their reading matter all reference to sexual or venereal disorders, even though their advertising columns teem with notices of abortifacients and abortionists, lost manhood restorers and sure and rapid cures for clap and pox.

It is only by the education of the public to the true and ever-present dangers of the venereal peril that we can hope to check the ravages of gonorrheal, syphilitic and chancroidal infections.

A beginning has already been made. The German Society for Combating Venereal Diseases was founded four years ago, and now numbers upwards of 4,000 members, scattered throughout the empire. This organization is actively at work and has recently

issued pamphlets adapted to each sex calling their attention to the perils of immorality.

Similar societies have been founded in others parts of Europe.

In America little has been done. The War Department has caused the publication of a booklet, "The Venereal Peril," which has been distributed to all companies of the army. A year ago, in New York, the American Society of Sanitary and Moral Prophylaxis was founded.

The problem is handled with considerable difficulty in this country, where Puritanical influences still prevail, giving rise to a great deal of hypocrisy and cant on sexual subjects. Nowhere else in such profusion are found those moralists who, as Frank of Berlin says, oppose every proposition trying to prevent venereal disease, seeing a moral coercion in the fear of infection. One large dispensary in New York City has no genito-urinary department, because the trustees will not foster vice by curing the diseases produced by ungodly conduct.

It is the duty of the medical profession to overthrow this mistaken reasoning and false modesty. Every effort should be made to show the subject in its true color to those exposed to its dangers.

They should be taught that syphilis may be conveyed in other ways than through sexual contact. Kissing, nursing, the instruments of the unclean surgeon or dentist, drinking vessels, even the communion cup at the altar, have proved methods of infection.

They should know, too, that the disease is infectious long after every visible evidence of it has disappeared.

The young man should be told that marriage during the active stage of syphilis will mean the infection of wife he has sworn to protect and entail disease and probably early death upon such of his children as may be unfortunate enough to be born alive.

His mind should be disabused of the notion that gonorrhea is a trivial, almost necessary disorder, no worse than a bad cold.

He should know that on the contrary it is one of the most dangerous as it is the most common of all infectious diseases. "It is not only worse than a bad cold," says Lydston, "but it is far worse than its much dreaded rival for venereal popularity, syphilis."

The man about town may see something besides the humorous side of a clap when he knows that the infection may give rise to an obstinate discharge, a constant menace to himself and his sexual

partner, that it may makes him sterile, possibly impotent, may leave him a cripple by infecting his joints, blind by invading his eyes, and may even cause death through infection of the heart. Failing these graver manifestations in himself, the germs of gonorrhea may linger unnoticed in his glands, to destroy the health or life of his innocent wife, or to make him the father of a child blind from the cradle.

It is not easy to decide how best this system of instruction is to be carried out. The writer would suggest that each county medical society should have a sub-society, whose duty it would be to promote this propaganda of public enlightenment.

This can be done by the issuing of suitable circulars for distribution among both male and female workers in shops and factories, and by public addresses to high school boys, or rather to boys of a high school age, care being taken to avoid every suspicion of vulgarity or salaciousness.

It is difficult to avoid the imputation of self-advertising when such lectures are given by physicians, and that is perhaps one reason why the men who are most competent to speak on such subjects refrain from doing so. But if the local medical society should designate certain of its older members, men whose standing would place them above suspicion of self-seeking, to deliver such talks, their scruples might be removed.

It is not pretended that education would be a perfect solution of the problem of venereal diseases.

Their occurrence among among medical students, and even among the younger members of the medical profession, proves that knowledge is not always power.

But he is narrow-minded indeed who believes that a dispelling of the general ignorance of the perils of venereal infection can prove anything but salutary. It is not by moral axioms that results are to be hoped for. A trial of over 2,000 years should convince the most enthusiastic religionist of that.

We should teach not only the possible punishments of an after-world, but the certain penalties of this.

Let him who worships at the shrine of Venus know that he must expect to pay her tribute in broken health and possibly even in death itself, a tribute to be exacted not only from himself, but from his innocent wife and unborn children as well.

Our sermon will not make him abstinent. The sexual desire, upon which the perpetuation of the species depends, is so firmly implanted that, to some, no penalty seems too severe for its gratification.

But we have placed before him the specter of fear, and close in the footsteps of fear follows caution.

DISCUSSION.

DR. LEBEUF: I am glad that Dr. Nelken sounded this note of warning. I think that the profession ought to do something. I recently had the opportunity of observing the method which the Mexicans have adopted in caring for these classes. They had a completely organized system. They have them separated into three classes. The percentage of syphilis has diminished. Of course the statistics are from hospital practice, but they show a decrease of eighty per cent. If they can achieve such results in Mexico we ought to be able to do something here.

DR. ALLEN: I think I heard the best part of the paper, and the recommendation is sanctioned by the foremost workers of the world. The idea of compulsory examination has been tried in many of the larger cities and countries and had to be abandoned; in France and in other countries where still in use it is a failure. Instead of a diminution of venereal disease there has been an increase. I spent some time in Mexico. While there I was told that venereal diseases were not as prevalent as formerly, which was attributed to compulsory examination. While the diminution there may be a fact, I do not think it can be attributed to the examinations, from what I saw of them, but rather to better education and dissemination of information on the subject.

DR. LAZARD: We all know the dangers of venereal infection. This paper is excellent, and has covered the ground thoroughly. The trouble is not in understanding the danger but in finding the remedy. Let some one suggest a remedy. Tell us what to do in the form of a motion or resolution; then we could take some action, but doubt very much whether there is anyone here who can suggest a means to mitigate a potent drain on the physical young America.

DR. NEWTON: I think that to a great extent the physicians are at fault in not impressing upon the patient the fact that it is not a disease that is quickly gotten over. I have been in the habit of telling the patient that I can not cure him within six weeks or more. I find that a large percentage of gonorrheal cases come from contact with cases where the parties thought themselves well. I find that by cautioning my patients I have been able to protect their families from danger. As a rule I have no trouble in postponing marriage when necessary. I find that we are prone to be afraid that we will lose the patronage of our patients if we fail to give promise of an early cure, to my mind this fear is subordinate to the needs of the patients' health. I have no stated price for treating gonorrhea. I charge ten dollars for the first treatment and two dollars each subsequent examination. The bill usually amounts to \$50.00 to \$75.00, and they pay it willingly when the matter is properly presented to them. I believe physicians are largely at fault for the spread of gonorrhea among married people.

DR. LAZARO: A short time ago I read a very interesting article in the *Journal of the American Medical Association* on this subject.

The writer is a very competent man who has traveled all over the world and has had a good deal of experience in this kind of work, and he felt justified in drawing the conclusion that such a thing as a safe public prostitute does not exist, that very often the examinations are made by men not competent, or, if competent, the examinations are made too hurriedly, or if the physician is competent and does his duty the severe measures necessary always aroused the whole body of prostitutes to resistance that, very often he could not make his visits without a police escort, that the attendance at the public houses increased as soon as the report spread that there was a physician in charge and that all was safe, and in spite of the examinations, the disease continued to spread; that a great many men who are kept away from brothels by fear of contagion, resort freely to them if this dread is removed, believing that they can profit by such a favorable opportunity with security.

While we must admit that we need laws to correct this evil, we must not expect too much of legal measures. "There never has been and never will be enacted any law which will protect people

from the consequences of their own folly so long as mankind is constituted as it is." Of course in matters so affecting the public health and good of society the people have a right, and it is their duty to demand the immediate and necessary laws. But to give life and strength to these laws, it is absolutely necessary to educate the people, create the public sentiment and it will soon crystallize into measures and laws that will check and limit the evil.

DR. NELKEN (*in closing*): I thank the gentlemen for the interest they have shown in the paper. I am pleasantly surprised to find that I have not been accused of exaggeration. The general practitioner who does not see so much of the grave sequelæ of venereal infection might be forgiven if he thought the picture too darkly painted, but to the specialist who has opportunity to see how malignant these conditions can become, exaggeration is almost impossible. While there is no pretense of offering any thing new in this paper, I think a great deal of good can come from constant reiteration. It was the unceasing "*Carthago delenda est*" of Cato which brought about the destruction of Carthage. The venereal infections is a delicate subject, tabooed in good society, but that is no excuse for the physician shirking his plain duty.

A Brief Review of Some Important Facts Regarding Tuberculosis.

By WALLACE J. DUREL, M. D.

I owe you an apology for bringing before you again another paper on the subject of tuberculosis; and if I do so, it is because I want to give you my views and experience with the disease in the past year; and to impress upon you once more how and where many of us physicians are not doing our duty towards the public, our families, and patients. I will try to be brief and to the point.

First—Let us take up the important question of diagnosis. It is my personal opinion that we too often, either from oversight or neglect, overlook many cases of tuberculosis, and do not diagnose these cases in their early stages.

As I have said in a previous paper read before the Parish Medical Society, we members of the medical profession, through lack of

proper diagnosis in many cases, and failure to instruct our patients how to take the proper care of themselves, both in prophylactic and curative measures, are in part responsible for the high death-rate among tuberculosis patients. It is a serious charge to make before a medical body, but it is nevertheless true.

It is enervating some times to see cases of tuberculosis drifting along, long past the primary and curative stages of the disease; often without the slightest knowledge or thought of the nature or seriousness of the disease.

Let us picture the vast majority of these cases. This is what we see: a poor man or woman giving a past history of all symptoms of early tuberculosis; having had all the one and other signs of the disease; having complained for a month or two of fatigue on exertion, bad stomach, loss of weight, perhaps some malaise and some fever, and oh, a most unfortunate occurrence, having consulted a physician, and having been given a cough mixture or tonic by this physician, with perhaps the additional advice to eat rare steaks, live out of doors, and take plenty of exercise.

Now my dear confreres, this state of affairs I see in my office most every day, and I am sure you also meet with them in your consultation rooms quite often.

It is now time we join hands, and that we do something to relieve this unfortunate state of affairs.

Let us be more careful in diagnosing our cases in the future. Better delay the prescription of our tonic, and have our patient come several times for an examination if necessary, then decide positively what is the matter with him; then tell him about his condition, and what he must do for himself and others.

As I have already taken in previous papers, in more minute details, the discussion of the symptoms and signs of early tuberculosis, I will pass but briefly upon the most important.

A patient giving a history of malaise, of slight cough or hacking, more so in the morning; of loss of appetite and weight; of contagion or infection; of a history of pleurisy, of hemorrhage or bloody sputum, and such other subjective complaints; we should strip off his upper clothing, and with pleximeter, hammer, and stethoscope make a systematic examination of his lung. If we find a feeble breathing or harshness in the respiration localized at any point, and more so at either apices, or left apex; or if, upon

very deep respiration and cough, we detect a fine crepitation or stickiness in the respiration; an interruption in the rhythm of the respiration, or the old prolonged expiration, an obscure respiration, or a "not clear breathing" I will call it; and if, besides, we find some signs of latent or recent pleuritic lesions; an abnormal resonance of the heart sounds over the lung area; a localized lack of expansion in either lung, an increase in lower lung expansion if upper lobe is involved; we are justified in being inclined to come to a most positive diagnosis.

Let us then have our patient take a two hour temperature chart and pulse record for one week, and have him return at the end of that week for another examination. During the meantime we can examine the sputum and we can see what this will give us.

Will the absence of *bacilli* in the sputum prevent us from coming to a positive diagnosis? No; we must not wait for *bacilli* to appear in the sputum for, when they do come, the patient has already broken his tubercles, and made progressive march with his disease. We must diagnose our cases before *bacilli*, and not wait for the little monsters. Unfortunately, the tendency amongst us is to wait for *bacilli*. When we do so, we lose very important time, and often sacrifice the lives of our patients. I have seen patients already with quite advanced lesions, and yet with no *bacilli* to appear in the sputum upon several consecutive examinations. So then, let us not wait for *bacilli* to appear in the sputum; and upon the return of our patient, if we find a rise of temperature from 1 to $1\frac{1}{2}$ degrees, or a sub-normal temperature, or increase of temperature after meals and menses; and if, besides, we find an accelerated pulse, and the same local signs found in the lung upon the preceding examination, we are justified, in my opinion, in saying that our patient has tuberculosis.

Now, if we are still in doubt, we can use the tuberculin test, and make sure of our conclusions. The use of this test we have discussed in previous meetings, and I am glad to see that it has been put into active use by many of our confreres present.

So much for our duty towards our patient up to now. The next question of importance is: Must we tell our patient that he has tuberculosis, or must we keep him away from such knowledge? To this I will say, *tell him; and make sure he understands every word that you speak to him.* Explain the gravity and seriousness of the

disease, and the sacrifices he has to do to get well. Now, gentlemen, how many of us are candid with our patients and tell them what they have got and what to do? Most unfortunately, too often, our patients are sent away only with a few words of advice, and with the saying that they have nothing but a bad cold, and if they rest a few days, or weeks, they will get well. Now, think of the great injustice done to such a patient. He comes to us with full confidence in what we tell him, and often with the determination to do what we tell him. And here, we send him off with the above few words, and leave it to himself and Time (the great diagnostician) to diagnose his own case.

What is our next duty towards our patient, his family, and the community at large? It is of much importance that we should tell our patient and impress upon him what danger he is to himself and fellowmen from infection and re-infection. The carelessness which we see in most consumptives is due to a lack of proper instruction by the physician. Patients are not taught by their attending physician what care they should take in the disposal of their sputum and in their daily management. I have had several hundreds of consumptives under my care in the past years, and I scarcely believe the words of many of my medical confreres: That it is practically impossible to have consumptives take proper steps in the disposal of their sputum, "that it is useless and cannot be done." I disagree altogether with these gentlemen, as my personal experience has been quite different, both in my sanitarium and in my private practice. It is just as easy to have a patient spit in a pocket-paper cuspidor, or *crache-tasse*, as let him spit in towels, handkerchiefs and on the floors. It is cleaner for a patient and less disgusting for those around him. It is a safe prophylactic measure for the patient and the rest of his family.

As an example of what we can do, I will take the menage followed at the sanitarium. All rooms must be well ventilated, not too small and not too large; free from any dust carrying agent, as carpets, curtains, hangings, etc. Floors must be bare so that they can be properly mopped with antiseptic solution at least three times a week. All towels, linens, etc., used by the patient must be dipped in bichloride solution before washing.

The bed clothing and woolen ware must be sunned and aired every day. Allow no spittoons in the rooms, halls, and so force a

patient to expectorate in a sputum cup. I have eliminated the use of spittoons altogether at my sanitarium and am glad to state with good results. Next to the care of the room, the dining-room and kitchen should be looked into with vigilant eye. All table utensils should be boiled before meals and after each meal. Tablecloths, if used, should be changed every day or at each meal if possible. Oil-cloths, which can be mopped every day with bichloride solution after each meal, are better adapted for this purpose. Paper napkins should be used instead of cloth napkins; patients should be directed not to touch their mouth, lips, moustache, and to have a paper napkin before their mouth when coughing. At a sanitarium cases are placed at different tables according to the stages of their disease, and to forms of bacteria found in their sputum. Patients with no *bacilli*, and with no temperature, those with temperature, those with very active lesions are all placed at separate tables. By so doing we reduce the degree of possibility of infection to a minimum, protect our patient and those around him. If such a thing can be done in sanitariums, it can be practiced at private domiciles as well. Who should be held responsible if such is not done? The family and the attending physician. It will cost but an insignificant sum, and take but a short time for the physicians to have copies of such rules printed and distributed to their consumptive patients. This would give those patients time to read these rules over carefully. The duty of the physician should not stop in only giving these rules to his patient, but he should see that they are properly followed.

As we all know the chief danger of infection from the tuberculous is through the sputum. What can we do to protect ourselves from such dangers? I suggest the following:

Educate the people towards taking precautionary measures, and guarding themselves against infection from any tuberculous subject. This education has to be instituted by and through the physician, his immediate and close contact with his patients, their families, and friends. As I have said above, if we teach the consumptive, and other patients, how to live, how to take care of themselves, and how to dispose of their sputum, we would soon have accomplished half of the success in this crusade against tuberculosis.

The next step to be taken, besides educating the people, is the adoption of fixed laws.

First. We should have tuberculosis recognized as an infectious or contagious disease, and included in the list of diseases to be reported, and so placed under jurisdiction of our health authorities.

Second. Forced laws regarding proper inspection of places infected by the tuberculous, should be instituted.

Third. Proper disinfection of all such places and premises should be as compulsory as in other contagious and infectious diseases.

We have a spit law, and this by all means should be strictly enforced.

First. In concluding, I will further suggest that all stores, public places, boarding-houses, private domiciles, theaters, factories, street cars, and all places where people congregate, be supplied with large spittoons containing water or some antiseptic.

Second. That such places be properly ventilated.

Let us glance into most of our large stores, factories, and other working places, and there we will see that few of these places where two-thirds of our population spend almost ten hours a day; are ventilated and cared for, in any way adequate to meet the demands of proper sanitation.

From the lack of proper ventilation and sanitation, and the indiscriminate spitting on floors, walls, in street cars, etc., we are daily exposed to infection and re-infection; and when we look into the statistics, find that many an employee and employer has lost his life through this most deplorable state of affairs.

I have passed but briefly upon the care of consumptives in their households, and will state that as far as the danger on the outside, in streets, thoroughfares, etc., it is much less than in ill-ventilated rooms and other such places.

On the outside where the sunlight and fresh air supervene there are small chances for the tubercle *bacillus* to live.

Another important fact to be considered in the care of tuberculosis and those liable to contract tuberculosis is the mode of life that such people should lead. No doubt that here again we physicians often do not advise our patients as to the proper steps they should take in order to live an anti-tubercular life. An abundance of fresh air is above all an essential factor in the prevention and treatment of tuberculosis. As I have said before there are two factors necessary for one to contract tuberculosis.

First. A predisposition arising from certain peculiar conditions of the tissues; either from inheritance or from acquired conditions.

Second. The presence of the turbercle *bacillus* and infection from the latter. By having our patients live in the open as much as practicable; by keeping them and impressing upon them the importance of proper house sanitation and ventilation; by having them take the proper nourishment and telling them how to superaliment themselves; by forbidding them any violent or excessive exercise; by removing them from any source of infection, and by showing how importance it is that they should live such life; we can eradicate the predisposing condition in many cases and in that way place our patients in the proper conditions necessary that they will not become of this most dreadful disease.

The open air life, the rest and the superalimentation are the three chief factors of prime importance in the management of those predisposed to tuberculosis.

The too frequent advice "to take plenty of exercise" must be replaced by that of take a good long rest. The dread of outdoor and night air must be overcome. We must instruct our patients to have no fear of night air and to remain out of doors or with open widows so that they can breathe all the night air possible. I do not want to enter into a discussion of the treatment of tuberculosis, but mention the above as some of the measures necessary in the prophylaxis of tuberculosis. I will conclude with the following:

First. Let us diagnose our cases early.

Second. Let us tell our patient the precise nature or condition of his disease.

Third. Let us instruct our patient as to the proper precaution he must take to protect himself and others from infection and re-infection.

Fourth. Let us at this meeting recognize tuberculosis as an infectious or contagious disease and place it in the hands of our health authorities for the remedying and relief of the unfortunate conditions mentioned in this paper.

Fifth. Let us teach our patients how to live and above all let us see that we do something for the poor tuberculous.

Gentlemen, when I consider the high death rate of this disease

in our Louisiana cities and towns; when I see the hundreds of consumptives taking no care whatever to protect themselves and others I feel as though I am not living in this age of progress, of education, and of civilization.

As you know, I have been a victim of this disease and, thank God, I have overcome it. I have passed through the worries and horrors which one afflicted with this disease has to pass through in his *anticipation to get well*.

I have treated several of my confreres since, and I plead to you this day, once more, to help me in instituting effective measures against the spread of this dreadful white plague.

Laryngeal Tuberculosis, its Treatment, Diagnosis and Prevention.

By HOMER DUPUY, M. D.

This contribution is based on the observation of approximately some two hundred cases of laryngeal tuberculosis, gathered from my private practice and from the clinics of the Eye, Ear, Nose and Throat Hospital. I will confine myself to generalizations, thus epitomizing my clinical experience.

While it has been proven beyond cavil that primary laryngeal tuberculosis actually occurred, the rarity compels us to practically regard it as a negligible quantity.

That this truth has not yet been generally recognized is evidenced by the many patients referred to the throat specialist with an intimation from the family physician that the case is probably one of laryngeal tuberculosis. In these instances the lung lesions may be either so deeply seated, so latent or incipient, as to be unrecognizable by the usual methods of physical diagnosis. Under these circumstances it is fortunate for the patient, as the laryngoscopic examination reinforced by the aids of a thermometer and a weighing machine permit us to reach a definite conclusion.

Cases in which the larynx bears the brunt of the tubercular onset are sufficiently numerous to emphasize the high value of the laryngoscope as a first aid in arriving at an early diagnosis of pulmonary as well as laryngeal tuberculosis. Oftener the invasion of the larynx is a late manifestation and is but too frequently the last patho-

logical event which hastens the painful dissolution. The lesions in the larynx and in the lungs are pathologically associated; so true is this, that examination of one region will in most instances reflect light on morbid changes in the other. This is a clinical fact of particular value when the larynx first sounds the note of alarm. While both regions may be simultaneously affected, or the lung involvement precede by a very brief period, the laryngeal disturbance becomes so evident that it overshadows all other phenomena. These are the cases requiring early recognition, for it is at this stage only we can hope to accomplish much good.

When we remember that clinical experience teaches us that a tubercular invasion of the larynx complicates matters and seriously jeopardizes the future chances of an otherwise hopeful case we recognize the prime importance of an early diagnosis.

A large percentage of pulmonary phthisis cases experience symptoms referable to the larynx at one time or another during the course of the disease. Such warnings as a persistent cough, recurring hoarseness, a feeling that there is something wrong about the throat, though they may sometimes prove unimportant, nevertheless call for adequate and intelligent investigation, if we are to detect the disease in its very incipency.

This leads us to the consideration of the premonitory stage. The laryngoscope furnishes the picture of two abnormal conditions as characterizing the preinfiltrative and preulcerative changes. The anemic and the hyperemic larynx mark this period of the disease. The marked pallor of the laryngeal surfaces not coincident with a general anemia, is highly suggestive of an impending tubercular invasion. It has, moreover, in my experiences, led to the suspicion and even detection of lung disease, especially the apices. The hyperemic form is not less frequent, and in appearance the antipode of the other. These alterations give rise to various functional disturbances in the organ of phonation. Some of the phenomena observed are slight and irregular attacks of hoarseness, in the interim the voice being perfectly clear, any attempt to force it ending in a momentary and yet complete aphonia. A tickling sensation in the throat exciting a dry, hacking cough, is also observed. It is at this stage that the laryngoscope proves of greatest value to the trained eye, one all-discerning and quick to perceive

the minute shades of difference which mark the pure catarrhal inflammation from the graver morbid alterations.

But it is when the disease becomes active that the laryngoscopic evidences can be accepted with more confidence. My observations tend to prove that the interarytenoid region is the part most frequently invaded, the true vocal cords being the least vulnerable. It is to the interarytenoid space I first directed my attention, as it is here that I have frequently observed the roughened, velvety and puckered surfaces so characteristic of the tubercular lesion. Two other vulnerable points are the arytenoid eminences, which usually become simultaneously implicated, assuming the typical club-shape, and sometimes resembling two large polypoid masses.

This picture cannot be misinterpreted, and when the laryngeal mucosa break down under the ulcerative process the mouse nibbled appearance is so distinct as to constitute unmistakable evidence.

This evolution in the laryngeal affection generally covers a period of some months. But I wish to emphasize particularly those forms of the disease when the progress is at first insidious and yet takes on so sudden and so rapid a development that the pathological events succeed each other so quickly that we must sometimes resort to an emergency tracheotomy, and are helpless to even retard the inevitable end. Such occurrence in the writer's immediate family, when everything seemed hopeful, painfully arouses his attention towards clearing up every case of suspected tuberculosis of the larynx for fear of these sudden explosions.

I have already intimated that in the incipient stages of the laryngeal affection, when the tuberculous lung disease escaped detection by the stethoscope, serious doubts may exist as to the exact nature of the lesions revealed by the laryngoscope. But here also the thermometer and the weighing machines are invaluable first aids in reaching a conclusion. Sometimes the diagnosis is in the nature of a problem and cannot be made at a glance. Such diseases as syphilis and epithelioma may be mistaken for tuberculosis even by an expert. Hoarseness in itself affords us no certain index as to the nature of the affection which has caused it. Our only safety from committing an error lies in prolonged, adequate and accurate observation.

TREATMENT: Sir Morrell Mackenzie's discouraging prognosis uttered twenty-five years ago, "that it is not certain that any cases ever recover," is emphatically contradicted by later experiences.

It is my earnest desire to consider the question of treatment and its results with conservatism and freedom from over-enthusiasm. I am nevertheless so encouraged by the undoubted cures obtained in pulmonary tuberculosis by the modern hygienic and dietetic methods that the future seems full of brilliant promise in regard to the local cure of the disease when it involves the larynx.

At the outset I wish to insist on what is being clinically demonstrated every day, that care without climate is better than climate without care, and that we must treat the patient and not only the larynx. The general treatment as represented in sanatorium principles takes precedence but cannot exclude intelligent care of the laryngeal affection when it exists. Evidence is not wanting in my own experience to prove that treatment in a sanatorium with no local care of a diseased larynx, while it may effect beneficially the lungs, may not have the slightest influence on the laryngeal condition which continues growing worse, and may in itself lead to relapses in the lungs.

It is after all the throat lesions which give rise to the most discomfort and pain. When once well developed they will render the cure of the lung disease absolutely impossible. The best results, therefore, can only be obtained when the larynx receives its share of attention. This must be adequate and performed with unusual technical skill. Mere spraying of the throat, awkward and ineffectual attempts to touch up the parts with any drugs whatsoever, does not constitute the modern therapy of laryngeal tuberculosis.

In certain cases, more especially when the early lesions are few, superficial, circumscribed, and non-progressive, local treatment is unnecessary if not positively harmful.

Voice rest, keeping the patient as far as is practicable, completely silent, is the essential indication in all stages of the disease. But it is especially applicable at the incipient stage. By reducing the functional activity of the diseased organ we certainly energize its recuperative powers. My own experience with voice rest bears out the good reports from other observers. Would that it could be applied more generally and to its full extent in the care of the laryngeal cases.

A resort to tracheotomy to obtain complete rest of the larynx seems a rather uncertain and risky means. I have seen it prolong life and no more.

Whether or not we ought to institute local treatment will depend largely on the lung condition. Without severe laryngeal symptoms in a case presenting a hopelessly advanced lung affection, local treatment is but adding pain and is a drain on the little strength remaining. Even a hopeless case, however, with dysphagia and marked throat discomfort, deserves palliative local measures. No drug in such instances has given me such uniformly good results as orthoform. It is such a boon to the patient that in order to avoid tolerance and preserve its marvelous anodyne effects it is wise to insufflate it at first in weaker strengths, reserving the pure powder for the inevitable more painful periods. Spraying with a solution of cocain seems only justified as a last resort. On the other hand, we have another group of cases presenting slight pulmonary lesions, or showing visible arrest of the process, who are free from high rises of temperature, who nourish well and are physically and morally disposed to stand a treatment which involves some hardships and at times requires stoical courage.

It is quite evident that the laryngeal infection in itself seriously jeopardizes the ultimate recovery, and moreover exercises a deleterious influence on the disease below when it otherwise presents hopeful signs of a cure. For this reason it is of prime importance to give precedence to the care of the larynx.

Again indications for treatment will depend on the situation, extent, progress and character of the lesions involving the larynx. In the early or premonitory stages in which the inflammatory changes are catarrhal in character and antedate infiltration and ulceration, I have already intimated that voice rest and improvement of general nutrition by the open air treatment are rational and effective measures.

When infiltration and ulceration set in I think the greatest good can be accomplished by energetic and persistent topical treatment.

The number of drugs recommended constitute in numbers a formidable but not very efficient armamentarium. In the last two years I have almost limited myself to the use of three agents:

formol, lactic acid and the galvano-cautery. Their alternative and combined use have rendered me the greatest service, and I will speak of these only. It need hardly be insisted on that complete anesthesia of the parts is absolutely necessary in our treatment of such a sensitive organ as the larynx.

Lactic acid in solutions of 50% and 75% is of undoubted value in the purely ulcerative lesions. On an unbroken surface, as in the infiltrated developments it is inactive. Its use is therefore restricted.

Formol in solutions ranging from 5% to 20% is giving me in most cases such a satisfactory, and in some instances very remarkable results. It is especially effective in the infiltrations which have hitherto proven so resistant to any other drug treatment. Beginning with the 5% solutions of formol we gradually reach the stronger solutions, 20% being maximum. Applied to ulcerative surfaces it appears to me much more efficient than lactic acid. Even though the parts be anesthetized, applications of formol are followed by some pain which, however, is of short duration; in exceptional instances the reaction is severe, but never serious; to obtain its best action formol must be thoroughly rubbed into the parts.

The galvano-cautery has no limitations; it is applicable to the various lesions in all stages, and has proven highly efficient when both lactic acid and formol seemed powerless. I apply it as a galvano-cautery puncture, with a long pointed electrode, and do so at several sittings a week. In the stubborn infiltrations with a tendency towards the development of stenosis, its application into the depths of the swelling, or its light touch to the ulcer, is now giving results which are full of promise. In cases presenting vegetations which spring from the interarytenoid regions, I have found nothing equal to the flat electrode in destroying these sprouting masses. No mutilations of parts or loss of function, no severe reactions have thus far followed the use of this agent in my hands.

The rationale of the electric puncture is an argument in its favor; briefly, the effect of the burn goes into the depth of the infiltrated areas, reaching certainly to the tubercular deposits themselves. The burning, through the evolution of heat and react-

ive inflammation reaches parts removed from the mere seat of the puncture.

PREVENTION: It is time indeed that the whole profession strenuously exert itself to make an early diagnosis of pulmonary tuberculosis. Herein lies the most potent means of preventing an extension of the disease to the larynx. This recognition of the affection in its incipiency, followed by an immediate application of the hygienic and dietetic sanitarium principles must certainly diminish the number of laryngeal cases.

The question of early diagnosis is, after all, one of supreme importance, as it is quite evident that the larynx once infected the patient's chances of ultimate recovery are greatly reduced.

We recognize certain factors which, when present, undoubtedly predispose to invasions of the larynx. The occupation of the individual exerts some influence in this direction by inducing low grade catarrhal inflammation of this organ. As the larynx becomes infected by sputum any disturbance in its normal integrity will render it more vulnerable to the tubercle bacilli. Statistics seem to prove that subjects of pulmonary phthisis, whose avocations require excessive use of the voice, are more liable to involvement of the larynx; dusty occupations also certainly irritate the parts and prepare the soil for infection. From the upper respiratory region may come morbid influences to which the larynx quickly responds. This is clinically demonstrated every day. But in the presence of a tuberculous process such affections as atrophic rhinitis, accessory sinus diseases, chronic tonsillar inflammations act as explosive material in inducing morbid alterations of the larynx, which make it more vulnerable, even when the lung lesions are slight. Along the line of prevention these are factors to be reckoned with, if we are to save the larynx and all that means.

The slightest laryngeal disturbance in a known tuberculous subject must not pass unnoticed. To ascertain the cause of a dysphonia or some other throat manifestation requires careful and intelligent laryngoscopic examination.

Routine inspection of the throats of consumptives is a measure worthy of recommendation, as it means the reduction of much pain and the saving of lives.

We are too prone to belittle the hoarseness and the apparently minor throat affections complained of by our tuberculous patients.

The very insidiousness of the laryngeal involvement renders it infinitely safer to heed warnings which under other circumstances might be considered unimportant.

Along the lines of prophylaxis is the reduction of hacking and purposeless coughing, which in itself induces congestion of the delicate laryngeal structures at a time when this organ lies immediately along the danger lines.

Vocal rest has already been insisted upon when the disease has actually begun its work; as a preventive measure, it is undoubtedly of greatest value. The ideal would be attained could we place the vocal cords of our patients in plaster bandages. The impossibility of such a procedure leaves us the only alternative, that of minimizing the use of the voice and vigorously prohibiting its unusual exertions at all times.

Nature is only conquered by obeying her, and it is for this reason that the modern sanitarium principles of pure air, high feeding, regulated exercise and rest, medical supervision and careful watching of the throat must greatly reduce the number of laryngeal complications, and thus greatly increase our patients' chances toward a complete recovery.

In conclusion, I wish to emphasize the following points:

- (1) Early diagnosis of pulmonary tuberculosis is the all-important step if we are to prevent implication of the larynx.
- (2) Invasion of this organ greatly retards when it does not actually prevent the cure of the lung affection.
- (3) The more general and routine use of the laryngoscope in patients afflicted with pulmonary tuberculosis means the lessening of pain, the prolongation or the saving of lives.
- (4) When treatment of the larynx is indicated it must be done thoroughly and adequately.
- (5) In the height of recent experiences the open air treatment, voice rest, formol, lactic acid and the galvano-cautery promise the best results as regards a local cure of the larynx.

DISCUSSION.

DR. NEWTON: The first paper was one of a great deal of importance and interest even to the general practitioner. I understood the doctor to lay a great deal of stress on the fact that laryngeal tuberculosis is secondary. I have sometimes felt that

it was possible that we might have the beginning of the trouble in the larynx. The second paper treats of the difficulties of making a diagnosis in the pre-tubercular stages. I also have had that trouble. The bacilli are not always present and the diagnosis is therefore extremely difficult.

DR. KAHLE: There have been a great many points of interest brought out. It seems to me that in this matter of diagnosis in the incipient stage we might get some help by using the agglutination test. It is a simple procedure, and is similar to the Widal test. It has been very successful in many cases, especially where a clinical diagnosis can not be made. I got good results in about 75% of the cases examined, the total number being about twenty-five cases. I have noticed that the earlier the disease is suspected and an attempt at diagnosis made with this test, the more favorable the chances of diagnosis if the disease exists. There was some objection to the test because it was said that it was possible that the agglutination would happen whether there was tuberculosis or not. Post mortem observations have revealed, however, that the proportion between the positive reactions, in cases in which there were no clinical manifestations, and a number of cases in which there were tuberculous lesions, unsuspected during life, is about the same. I do not think that this agglutination test will be practicable in the country, but in some of the laboratories here it might help the physician in making the diagnosis.

DR. MAYER: While heartily concurring in all the points made, we should emphasize the necessity of adopting a comprehensive system of reporting all cases and registering them, not for the purpose of fastening any badge of infamy upon the unfortunate victim of tuberculosis, but as a protection to the community. The tuberculous patient ought not to be regarded as a victim of some hereditary dyscrasial taint, but as the victim of the sanitary laches of the community, laches which cost hundreds of thousands of lives annually to the people of the United States.

The restriction of the incursions of this awful plague is a matter in which we are all interested. I think the National Government should take it up because it reaches every State in the Union, and we need greater preparation and more elaborate equipment than any State alone can provide. The National Government should aid the States in any effort they might make

to educate the people in the true cause, nature and prevention of this disease, and in preventing the economic loss which the country sustains in the premature death of her afflicted citizenry at the most productive age, and pointing out to the masses that aside from the humanitarian aspect which appeals only to the finer instincts, that the enormous loss entailed by the annual destruction of so many foot tons of energy makes it worth while to put in operation those simple remedial hygienic measures which, if religiously carried out by the instructed masses, would rob this dread pestilence of its force and horror. Year by year this disease cuts a wide swath in our ranks, and our profession should enlist in the crusade not only of cure but of prevention.

The ignorance of the masses on this as on all sanitary questions is profound; apparently harmless agencies like the broom of the housemaid and the delicate lace handkerchief of the chatelaine become clothed with a long train of evils, the former by disturbing and scattering the bacilli laden dust and the latter every time it is shaken, when infected, both becoming engines of destruction more to be dreaded than a gatling gun. The use of air suction tubes must supplant the broom, and the use of paper pocket handkerchiefs kept in a reticule and burned at frequent intervals would be a most sanitary precaution, and society by making them fashionable, could render a service to humanity.

Report of Two Unusual Cases of Urethral Lesions.

By CARROLL W. ALLEN, M. D.

J. M., æt. 38, country merchant. Had gonorrhea 20 years ago, for which he was very indifferently treated, using principally remedies recommended by his friends. The urethral discharge finally stopped after about 9 months.

He paid no further attention to his urethral condition, thinking his troubles were over, and had about forgotten his earlier experience when about ten years later he finally consulted a physician, upon examination a stricture was discovered. This was treated by dilatations with sounds.

He removed to the country a short while afterwards. Before leaving he was instructed in the use of the sound upon himself by his physician, and advised to pass it at stated intervals. This

he did, at first experiencing no difficulty, but later the sound would stop when about half way back. Probably forgetting some of his earlier instructions he used force, causing a great deal of pain and bleeding. He had the same experience at all subsequent times that he attempted the passage, but persisted a number of times without seeking further advice. His description of some of these experiences suggest that he made a false passage.

He finally gave up all self treatment and passed several years fairly comfortably when he began to be disturbed by frequent micturitions, day and night, usually worse at nights, sometimes every 15 minutes, and pain during the act. Later on, in addition, was disturbed by priapism and uncontrollable desires, but indulgence did not bring relief and the act was so painful he was forced to desist. His sleep at nights was much disturbed and he was barely able to attend to business.

He was treated by his local physician with some relief, but the frequent micturitions still continued. After about a year of this condition the priapisms gave place to entire absence of all desires and erections, with disappearance of pain, the frequent micturitions continuing, though not so severe. Later on the frequent urinations were associated with intervals during which he could not micturate, or after starting the stream it would stop; at this time he was examined for stricture and told he had none. During our recent Carnival he was in town and consulted me for impotency, which had existed for two years. Since his distressing experiences with priapism he also complained of frequent micturition and the occasional sudden stoppage of the stream without cause.

Examination: First and second urine contained shreds and albumin. A bulbous bougie 18 F. was caught about 4 inches from the meatus. I used a smaller instrument but could not pass the cut off muscle until I used cocain and then with much difficulty.

I concluded the stricture was causing a spasmodic contraction of the cut off muscle. I dilated the stricture and finally succeeded in passing the cut off muscle without cocain, but with difficulty and pain; the sound impinging upon the cut off muscle would grit, palpation in the rectum with a sound in the bladder revealed a small mass of hardened tissue at this point.

These treatments were always followed by pain and spasmodic contraction. The urethroscope showed a congested posterior urethra, a granular patch inside the cut off muscle, with a slight fissure like a fine red thread with thickened edges running through what I took to be the cut off muscle. The tissues here were all thickened and greyish. Just outside the cut off muscle was a whitish grey patch covering the floor of the urethra and of fibrous hardness. As the urethroscope was drawn from it the urethra stood open like a tube not collapsing.

These lesions were all treated with silver nitrate applications and massage upon a sound, and the stricture in the penile portion kept dilated.

At present the patient has received about a dozen treatments and is much improved but far from well. The pain and frequent micturitions have ceased, but the impotency is the same. The patient was last seen about two weeks ago. He comes to town occasionally for treatment, but not as often as I would like.

In considering this case it is interesting in several ways.

1st. Illustrating the dangers of neglected gonorrhea and the sequels which may come on years after.

2d. It is reasonable to conclude that the lesions found at the cut off muscle were the result of frequent traumatisms inflicted by the patient with the sound, or at least aggravated or made possible by it, and illustrates the danger of placing this instrument in the hands of a patient for self treatment.

3d. The earlier reflex symptoms and pain show the great disturbance possible in irritable lesions of the urethra.

4th. Their subsidence while the lesions still persisted can be explained by the extreme changes occurring in the mucous membrane at this point destroying the nerve endings or the exhaustion of the reflex center by long continued irritation, or probably a combination of these two causes.

5th. Lastly the case illustrates the necessity of thorough endoscopic examination of all such cases and the necessity of the bulbous bougie when searching for strictures.

The following case was seen by me two summers ago while traveling in Southern Mexico, and is interesting from the history and crude method of treatment which I had to adopt, as I was not practicing and had no instruments with me.

This case, like the first one, illustrates in a marked degree the reflexes and suffering possible in urethral lesions, and while it is nothing new helps to remind us of these conditions.

Mrs. T., at 39, native of Texas, married 21 years, 5 children, no miscarriage. Has lived in Southern Mexico 12 years.

For 3 or 4 years past has suffered with frequent painful urination, both by day and night, worse at times, often rendering sleep impossible, and occasionally while the desire was imperative she would be unable to urinate for several hours.

Coitus was almost impossible owing to pain and occasionally to vaginismus which would occur only during an attempted sexual act.

She had lost weight and appetite and become nervous and anemic.

Urine was normal.

Examination showed the vagina and vulva normal. The urethral opening was slightly inflamed and sensitive. Upon palpating the urethra about one-half inch from the meatus, an exquisitely sensitive point was found which caused the patient to cry out with pain and forced me to desist in my examination.

On a later occasion, under a strong cocain solution and two hairpins which I shaped something after the pattern of a wire meatus speculum, I examined this tender point and found what I concluded was a caruncle, to which I applied silver nitrate.

During several subsequent treatments I used something less than a drop of nitric acid applied with a medicine dropper. There was considerable reaction following the first treatments, but after three weeks, when I left that part of the country, the patient seemed about well. I have since heard from her. She has had no further trouble and has regained her normal health.

Orleans Parish Medical Society Proceedings.

President, DR. JOHN J. ARCHINARD. *Secretary*, DR. AMEDEE GRANGER.
141 Elk Place, New Orleans.

In Charge of the Publication Committee, DR. AMEDEE GRANGER, *Chairman*.
DR. HOMER J. DUPUY and DR. E. O. TRAHAN.

MEETING OF MARCH 9, 1907.

PRESENTATION OF CASES.

DR. A. G. FRIEDRICHS presented *A Case of Congenital Cleft Palate, Corrected By Apparatus*. (*Abstract of remarks not furnished Publication Committee.*)

DR. F. W. PARHAM read a paper entitled

Shock.

The three conditions, syncope, collapse and shock, are closely related, and it is difficult to make any clear distinctions among them, at least in the lighter grades. "In syncope,"* the effects produced are "caused by the sudden stoppage of the cerebral circulation, but it seems probable," as Mummery remarks, "that this is not due to cutting off of the blood supply to the brain tissue, but is probably mechanical in the sudden change of tension in the cranial cavity as a whole. Sudden lowering of the cerebral arterial pressure would tend to cause a vacuum in the cranial cavity as the amount of blood in the cavity tends to be diminished suddenly and the amount of cerebro-spinal fluid immediately available to take its place is very small and increase in the quantity of the latter fluid by the transudation of lymph must of necessity be slow. Consequently, when the blood-pressure in the cranial cavity is suddenly diminished a great alteration in the pressure on the brain tends to take place. When the cranial blood-pressure is slowly reduced, as is the case in shock and collapse, no such sudden alteration in intra-cranial tension occurs and there is

* From Mummery's Hunterian Lectures on Shock in "*Lancet*," 1905.

time for cerebro-spinal fluid to take the place of any deficiency of blood in the cerebral vessels. No alteration, therefore, in the intra-cranial pressure need occur, and as a matter of fact we do not find loss of consciousness and spasticity associated with the conditions of shock and collapse. The physiologic law, which has been called the *Monro-Kellie Doctrine*, states that the quantity of blood in the brain must be the same at all times and that it is not the volume of blood, but the rate of flow through the vessels that is altered by changes in the general blood-pressure." Mummery thinks that this law, however, is only true for sudden alterations in blood-pressure, and that the explanation just given about cerebral effects, as seen in syncope and shock, is correct. "The vaso-motor center appears not to exert any influence over the cerebral circulation, as is the case elsewhere in the body, so that the anemia of the brain occurring in syncope is to be attributed to the fall in blood pressure in the general circulation, and not to the contraction of the cephalic blood vessels associated with a suspension of function of the cortical centers of the cerebral hemispheres, as loss of consciousness is a most marked symptom of the condition.

Crile makes the following distinctions between shock and collapse: "Surgical shock is a state of low blood pressure, due to functional impairment or exhaustion of the vaso-motor center. This impairment or exhaustion is due to traumatism (operation or injury) of sensitive tissue.

"Collapse is a state of low blood pressure due to a suspension of the function of the heart, or of the vaso-motor center, or to hemorrhage. Among the causes of collapse may be mentioned injury of the heart; inhibition of the heart, reflexly through the superior laryngeal or directly through injury of the vagus or vagus center; injury of the vaso-motor center, etc.

"The differential diagnosis between shock and collapse is very largely dependent upon the history of the case. The symptoms in both are directly identical. Even in the cases of collapse due to hemorrhage the differential diagnosis without the history and without the direct evidence of hemorrhage is almost impossible."

The similarity of the picture in these conditions and the concurrence of manifold causes bring it about that one form may pass over into another, so that it is difficult to make clear lines of demarkation among them.

According to Lexer, collapse is that condition in which the sudden prostration of strength with flagging of the heart stands in the foreground. He enumerates as causes of collapse,

1st, Severe bleeding after injuries or operations.

2d, Injuries of the heart itself, or overexertion from (a) disease of the valves, (b) disease of the heart muscle, (c) disease of the vascular system, (d) sudden calls upon the heart's activity in lung embolism, (e) sudden anemia from brain embolism, or from sudden raising of the head of an anemic or narcotized patient, (f) poisoning: from snake poison, prolonged narcosis or certain chemical substances, (g) bacterial intoxication in which, according to Romberg and others, a central blood vessel paralysis plays the chief role.

The characteristic sign of syncope, as contra-distinguished from collapse or shock, is the sudden loss of consciousness dependent upon the retreat of blood from the brain, due largely to psychic influence, but it is difficult in many cases to distinguish this condition from collapse, and both are with great difficulty distinguished from shock, especially when associated with an injury.

As to shock, Fischer, as long ago as 1870, elaborated a theory based upon Goltz's experiment with the frog. The repeated tapings upon the epigastrium produced a reflex paralysis of the heart and a loss of tonicity in the splanchnic vessels, both arteries and veins. The great mass of blood stagnated in the abdominal vessels.

Irritation of the splanchnic nerves, on the one hand, produces contraction of the powerful abdominal blood vessels and increases greatly the arterial tension throughout the body; on the other hand, division of the splanchnics produces hyperemia of these vessels. Stricker says: "If this reservoir is wide open, it can contain so large a portion of the total amount of blood that the rest of the body becomes anemic. An animal with complete paralysis of the abdominal viscera therefore bleeds to death, as it were, into its own abdominal vessels."

There is dilatation of the mesenteric and of the renal arteries and overfilling of the portal veins.

The blood vessels of the splanchnic area are really the regulators of the blood pressure throughout the body.

Schneider, following the views of Falk and Sonnenburg as to the cause of death after extensive burns, also adopted the theory of reflex vaso-motor nerve paralysis. Every irritation, he said, causes at first contraction, then general dilatation of the blood vessels. "The heart is unable to force the small amount of blood through the empty vessels. Its own muscles are insufficiently supplied with oxygen and it gradually ceases to beat. The great lowering of the temperature of the body, he thought, could be explained by the lowered blood pressure and the consequent insufficient oxygenation of the tissues, or by the retarded blood flow and consequent loss of heat, or finally by direct influence on the heat center. Schneider thus extends Fischer's theory to include paralysis of the whole vascular apparatus." (Warren.)*

Mansell-Moullin considered this theory a great advance on all previous viewse, but it does not, in his opinion, explain all the phenomena of shock. He regards the vascular paralysis as an inhibition and thus agrees with Howell.

Groeninger took exception to the vaso-motor theory, recalling that Goltz himself thought his experiment did not show shock but syncope. If the theory was correct, hemorrhage and shock would produce the same signs, but there are great differences. In the Goltz experiment in *rabbits* no anemia of the peripheral vessels could be shown, and he did find the abdominal vessels empty. Calabar bean, which prevents hyperemia of these vessels, he reasoned, did not prevent the production of shock, and in opposition to Stricker, many claimed that in mammals sufficient blood could not be made to collect in the abdominal vessels to produce this so-called "intravascular hemorrhage". Where it did occur, as after premature emptying of the pregnant uterus or after tapping, the condition was syncope and not shock, being really brain anemia. Moreover, Warren says, the experience of many surgeons agrees with his own, that shock is not accompanied by visible dilatation of these abdominal vessels. Groeninger, Warren thinks, has made one of the most complete studies of the action of the nervous system in shock. He admits the vascular paralysis, but ascribes it, not to inhibition, as Fischer did, but to a condition of fatigue or exhaustion of the centers of the cord and medulla.

*Much of this historical account is taken from that very readable "Surgical Pathology" by John Collins Warren, of Boston.

Lewisson produced a temporary paralysis and loss of reflex irritability in the hind legs of an animal by seizing and squeezing the kidney. Thus we see described as long ago as 1870, when Rischer wrote, and 1885, when Groeningen's work was published, the two theories most popular at the present time, the one of over-inhibition of Howell, and that of vaso-motor exhaustion so ably supported by Crile.

According to Crile, the most important factor in the production of shock is mechanical; this means mechanical stimulation of nerve tissue, all other tissues may be neglected. The whole problem of the etiology of shock is the problem of the various kinds of stimulation of the nerve tissue. Injuries, therefore, of the various tissues and organs are calculated to produce shock in direct proportion to the nerve supply as to quantity or quality, or both. Tissues not supplied by specially sensitive nerves will give rise to shock in proportion to the extent of tissue involved; while a much smaller injury of other tissues or organs may give rise to much more serious shock. The essential phenomenon in shock is low blood pressure. All other physiologic changes are subordinate to this, or of minor importance, such as alteration of respiration and cardiac action, modified mental state, loss of voluntary and involuntary muscular power, diminished renal secretion and lowering of body temperature. In any case, the blood pressure and circulation being sufficient for physiologic purposes, there can be no serious shock.

Crile thinks that shock is essentially a paralysis, or at least an exhaustion, of the vaso-motor centers, whilst in collapse there is no such exhaustion, but merely a suspension or inhibition of function. The exact physical state of the vaso-motor center in shock has not been determined.* In cases of death from shock no physical damage of the centers has been made out. According to Crile, then, pure surgical shock is mainly due to the effect on the vaso-motor centers of the afferent impulses set up by trauma, exposure, etc., each impulse producing an effect on the function of these centers; a sufficient number of such impulses with sufficient intensity over a given period of time causes the vaso-motor centers to lose their excitability; during the production of the functional

*Hodge, quoted by Warren, seems to have made out certain changes in nervous structure.

impairment and final breakdown of the vaso-motor centers the blood pressure becomes irregular, proportionately lower, and when the final stage of complete loss of excitability of the vaso-motor center has been reached and the larger peripheral arteries cannot be palpated, the carotid would probably not register more than 20 m. m. of mercury. It will thus be seen that the most prominent manifestation in shock, the fall of blood pressure, is seized upon in this theory, but we should, as Howell insists, understand the limitations when we attempt to describe the essential phenomenon in shock as a fall in blood pressure.

Stimulation of the depressor nerve of the heart, or of nerves of other regions, such as the ear or testes, will bring about vascular dilatation. The effect, however, passes off immediately, and is, therefore, not shock. If, therefore, we say that the most important symptom of shock is a more or less complete paralysis of vascular tone, we must state certain limits to the extent, and especially to the duration of this paralysis, and designate the condition as one of shock only when it transcends these limits. In experimental conditions we recognize the fact that vascular paralysis is as absolute as if every vasoconstrictor fiber in the body were divided and the vasoconstrictor center destroyed. Between this condition and that of functional vascular dilatation with slight fall of blood pressure we may presumably have every degree of variation, but we are not justified in using the term shock except in those cases where the vascular paralysis is not only extensive, but is maintained for a long period after the original stimulus causing it has ceased to act. What is the immediate cause of the profound and prolonged vascular paralysis? "Experiments," says Howell, "that I have made recently, throw some light on these problems, and have led me to take a point of view somewhat different from that usually assumed in discussing the causation of shock. The experiments were made upon dogs, and shock was produced by one of the following methods:

- 1st. Exposure and handling of the abdominal viscera;
- 2d, Long continued stimulation of the cutaneous nerves effected usually by the application of hot water bags to the skin;
- 3d, By operations on the brain involving removal of the skull and dura, and in some cases also of the cerebrum."

"Of the several methods that I used the one that caused shock most promptly and most frequently was operation on the brain. In some cases mere exposure of the brain produced complete shock, while in other cases, after removing a portion of the skull the animal still showed a normal pressure, but fell into shock more or less rapidly after ablation of portions of the cerebrum." Howell's conclusions on shock published in *Contributions to Medical Research*, dedicated to Victor C. Vaughan, are as follows: "Shock is characterized by a long continued low arterial pressure (vascular shock) due to partial or complete loss of activity of the vaso-constrictor center, and by a rapid feeble heart beat (cardiac shock) due in part at least to a partial or complete loss of activity of the cardio-inhibitory center. Second, cardiac shock may occur more or less independently of vascular shock, but vascular shock is always diminished in amplitude and usually in rate. Third, shock may be produced experimentally by severe operations of various kinds, but most often by extensive operations on the brain. Fourth, the physiological evidence in experimental shock indicates that the condition is due fundamentally to a strong inhibition of the medullary centers (vaso-constrictor, cardio-inhibitory), leading to a long continued suspension of activity, partial or complete. Fifth, stimulation of sensory nerve trunks or of sensory surfaces in an animal in a condition of shock leads to a further fall of pressure and to this extent augments the condition of shock." Howell thinks that the theory of over-stimulation of sensory nerves producing exhaustion is incorrect. The pressure effects of sensory stimulation are inconspicuous. "Indeed, vaso-dilatation may occur at once and pass on quickly to complete loss of tone."

Crile's experiments confirm his own, that stimulation of certain sensory regions, such as the dura mater, which usually gave a depressor effect, leads more often to a condition of shock. Theoretically, a reflex depressor action on blood pressure may result in two ways,

1st, From stimulation of the vaso-dilator center, causing peripheral inhibition;

2d, Central inhibition of the vaso-constrictor centers.

The evidence, he thinks, is in favor of the latter. Howell thinks that both in cardiac shock and vascular shock the low

blood pressure is the result of over inhibition rather than over-stimulation.*

The weight of evidence seems to be in favor of the explanation of Crile. Yet some objections have been urged against it. In Frank Vale's Prize Essay on Shock, published in August, 1904 (*Medical Record*), he writes that, as Mansell-Moullin pointed out in 1879, if the dilatation of the abdominal vessels, the intra-vascular hemorrhage of Fischer, was the main factor in shock, general vaso-motor paralysis following section of the cord would result in immediate death. His investigation showed that section of the cord produced a vaso-motor paralysis that drained the tissues of fluid as does a hemorrhage, whilst in shock the opposite, an increase in specific gravity of the blood occurred. This led him to conclude that vaso-motor paralysis at all comparable to that of cord section, did not exist. He thinks the data sufficient to say that shock is not due to exhaustion of any one center or paralysis of any one system, but "that the function of every organ, tissue and cell in the body is depressed as the result of a powerful impression on the nervous system, which dominates all the functions of life." The conclusions of Brown-Sequard many years ago from his observations of the arterial hue of the processes of exchange, i. e., an arrest of metabolic processes—a general arrest of cell activity." This would then be a condition aptly described by the word "*Erschütterung*" of the Germans. There seems no reason why this might not be true, but it would not offer serious objection to accepting the theory of Groeningen and Crile of exhausted vaso-motor centers as the basic pathology of shock. There are some inconsistencies in the reasoning of Vale, which I cannot reconcile. I prefer to accept the simpler explanation of Crile, so admirably demonstrated in his work on Shock, and his later one on Blood Pressure.

*Leonard Hill suggests that it is highly probable that the vascular muscles are maintained in a state of tone by the tension of the blood within the vessels. This is in analogy with the causation of excitability of the heart by a rise of internal tension. On this theory the vaso-constrictor fibres increase the excitability of the vascular muscles to the stimulus of blood tension, the vaso-dilators diminishing this tension stimulus. The vaso-dilators are, therefore, inhibitors. It is conceivable also that the quality of the blood influences the maintenance of tone. This increased alkalinity and the suprarenal secretions exert a tendency to maintain contraction of the vessels, so that Howell's explanation may possibly be correct. The fact of alkalies, like carbonate of soda, and the suprarenal secretions like adrenalin, exerting their effect locally in the blood upon the walls of the blood vessels, notwithstanding the condition of the vaso-motor centers, and even when disconnected with these centers, shows the possibility of increasing the blood pressure by external measures acting peripherally upon the blood vessels themselves.

The most recent opponent of this vaso-motor exhaustion theory is Boise, who read a paper recently on Shock before the New York Obstetrical Society, and seemed to have convinced some of the best men of the profession of the correctness of this theory. (*American Journal of Obstetrics, etc.*)

Boise accepts the data furnished by Crile, but comes to quite different conclusions. He believes Crile's own experiments show "that there is excessive irritation of both the vaso-motor and cardiac centers, whereby the arteries and heart are both spasmodically contracted," that "the spasmodic contraction of the heart during systole and its very imperfect relaxation during diastole" prevent its receiving much blood from the veins and that consequently little is sent into the arteries, the pressure, therefore, being low because there is not enough blood to distend them.

He believes that the pathology of shock rests really upon sympathetic irritation, and that the cardiac and vascular spasm results from reflex stimulation of the accelerator or augmentor nerves of the heart and the vaso-constrictor nerves of the arteries. He bases these conclusions upon certain data of Crile's experiments.

Severe manipulation of the testicles was always followed by a fall in blood pressure with no appreciable preliminary use, and therefore no evidence of uncomplicated stimulation of vaso-constrictors, but there must have been severe stimulation of the augmentor nerves of the heart through impulses received from the afferent nerves. That this must be so, he argued, is shown by the fact that these impulses were severe enough to cause profound shock where neither the vaso-motor center nor the stellate ganglia had been touched, but that they could not produce shock ~~nor~~ any appreciable change in blood pressure if the stellate ganglia had been previously removed. For example, in Crile's experiment X the stellate ganglia (from which the augmentor impulses are sent to the heart) on both sides were removed, after which all kinds of violence caused very little change in pressure. Furthermore, the vaso-motor centers being uninjured, if Crile's theory were correct, the vaso-motor centers should have been exhausted by the powerful centripetal irritation resulting from the crushing of the legs or the manipulations of the testicles, and shock should have resulted. He thinks the absence of shock is to be explained in these cases by the fact that no stimuli could be sent over the augmentor

nerves to the heart, and that consequently there was no interruption of the normal flow into the vessels.

Further, cutting of the spinal cord at the upper dorsal vertebra caused sudden and great fall in pressure, through paralysis by section of the vaso-constrictors. After this, manipulation of the intestines caused *still further fall*, the heart beating faster and shorter till death. This could not be explained by stimulation of the vaso-dilators, because the center had been cut; it could not be cardio-inhibitory, since the heart beats were faster, not slower. Nor could it be irritation of the splanchnic nerves, because that would have caused contraction of the splanchnic vessels. It could only be in his opinion due to reflex stimulation of the cardiac augmentor nerves and consequent spasmodic contractions of the heart. These conclusions seem confirmed by the finding *post mortem* in such cases of a contracted, empty heart, and full, tense *venæ cavæ*.

This argument appears unanswerable, but it is effectually disposed of by the experiments mentioned in Crile's work on Blood Pressure, in which he shows by many experiments that shock could be just as readily produced when both *accelerantes* and *vagi* were cut as when these nerves were intact. Boise argues, however, that this experiment is so diametrically opposed to those in Crile's "Surgical Book" concerning the effect of removing the stellate ganglia that he can only reconcile them by saying that in cutting the accelerator nerves some of their fibers must have escaped.

As the whole superstructure of his argument rests upon statements of fact, it looks like begging the question, however ingenious Boise's argument may be, and it does display great ingenuity. As the whole argument pro and con rests upon Crile's statements of the results of his experiments, we cannot admit that an apparent contradiction in his last work of statements appearing six years previously can be taken as invalidating the whole basic structure of Crile's comprehensive and perspicuous explanation of shock and its phenomena. On the principle of *falsus in uno, falsus in omnibus*, we do not feel justified in taking up more time in pursuing Boise's argument in explanation of all the secondary phenomena of shock. I have dwelt somewhat on Boise's views, since his ingenious reasoning might mislead one into giving such relaxing drugs as *veratrum viride*.

As to the theories that have been advanced, I shall mention merely the much less ingenious, although highly elaborated, explanation of Malcolm, that the essential pathology of shock is a contraction and sudden emptying of the peripheral vessels into the more central, warmed parts of the body, the heart maintaining its vigor all the while. As neither Boise nor Malsolm has fortified his position by adequate experimental work, we can safely dismiss their theories until future animal investigation brings them again into prominence.**

I adopt, then, with Mummery, the theory of Crile as affording the most reasonable and satisfactory explanation of the phenomena of shock and on this basis I shall proceed to discuss the treatment.

TREATMENT.

In syncope, there is not paralysis, but suspension of cardiac and vaso-motor function, due to brain-anemia. Hence, lowering of the head, elevation of the rest of the body and cardiac stimulants are indicated.

In collapse, there is also suspension of vaso-motor and cardiac function, most frequently from copious external or internal hemorrhage; the indications, therefore, are the elevation of the extremities and trunk, so as to fill the heart with blood from the veins; cardiac and vaso-motor stimulants, digitalin with nitroglycerin, and strychnin, to arouse the heart and send the blood to the brain, all may be useful. In collapse so long as there is life there is hope. As hemorrhage is so frequently at the bottom of collapse, it is all important to find and stop the hemorrhage. Failure to do this would make the stimulant treatment worse than useless, actually harmful, by increasing the hemorrhage. Having stopped the hemorrhage, stimulants, auto-infusion, hot saline infusion, recto-clysis, hypodermatoclysis, and in an extreme case, blood-transfusion by the method of Carrel, which consists in connecting the artery of a donor with a vein of the patient, might be tried. The patient must then be put to bed with external application of heat and given absolute rest.

It is important to bear in mind that a previous or associated shock proportionately increases the danger, for both shock and hemorrhage attack the integrity of the vaso-motor mechanism,

**In the last number of the *Lancet*, just received, appears an address on the same subject delivered before the Royal Med. & Surg. Soc. on Feb. 12, in which Malcolm continues to maintain his opposition to Crile's conclusions.

hemorrhage by diminishing its nutrition, and the causes of shock by overworking them. The older an operator the more he respects blood and the more careful he is to avoid unnecessary manipulation of sensitive organs.

If the treatment of collapse from hemorrhage be difficult, how vastly more complicated is the problem of managing shock. Many cases of shock are so hopeless that once developed, all measures are useless and death inevitable. How important, therefore, to prevent it whenever we can. Here, truly, an ounce of prevention is worth a pound of cure.

"In surgical practice," says Crile, "one of the most difficult problems is "to estimate correctly the vital cost of executing a given technic."

All the predisposing causes, age, debility from previous disease, actual presence of disease, especially of kidney or heart, diabetes, all must be taken into account, in forming our estimate of the probable resisting power of the patient to surgical attack. Here, blood loss is of extreme importance. The weaker the patient, from whatever cause, the more careful we must be not to attempt too much. We must not forget that shock results from the exhaustion of over stimulation, excessive irritation, of sensory nerves. We must not add to this exhaustion. There are three ways of avoiding this:

First. Avoid unnecessary irritative manipulations, general or local.

Second. Prevent the sending of the impulses to the centers.

Third. Render the centers less susceptible to the irritation.

To illustrate the first, avoid in abdominal operations unnecessary handling of the viscera and avoid the irritation of unnecessary use of sponges for wiping or packing off. This is also well exemplified in operative work about the brain.

Second. To prevent the sending of the impulses from the periphery the splendid work of Crile and Cushing have established the value of nerve blocking by cocain. This may be of two kinds:

First. Blocking of nerve trunks, *e. g.*, varicocele operations under cocain infiltration.

Second. Spinal subarachnoid injections of cocain, stovain, alypin, tropa-cocain and the like.

Scheiffer, of Bonn, in the *Deutsche Zeitschrift fur Chirurgie*,

relates some interesting experiments on dogs. It is a well known fact that dogs shot with small shot at a distance of thirty meters fall at once and do not rise again. He found that such animals, when cocain had been injected after Klapp's method into the spinal canal, did not fall to the ground, but frequently ran some distance before falling, appearing not to be shocked at all. This would go to show that by spinal injection of cocain the shock effects of peripheral irritation may be prevented. Dawbarn mentions in this connection a valuable suggestion in the February issue of the *Long Island Medical Journal*. He thinks that by prolonging the blocking effect, shock will be more surely prevented. He has done this in two bad cases by combining the cocain with a half dosage of Metzler's Sulphate of Magnesium.

Under the third head,—to render the centers less susceptible to the centripetal irritation, morphin and general anesthesia have, most undoubtedly, decided effect in preventing shock. Morphin, to soothe the already irritated centers, combined with atropin to prevent inhibition of the heart, is certainly most valuable in shock.

Anesthetics also have saved many lives from death by shock. But a danger lurks in their use. Of ether, the safest by far of our anesthetics, Wainwright* quotes Oliver Wendell Holmes as saying: "With ether we go over into the valley of death, but with a return ticket." "The trouble," comments Wainwright, "is that so many things may happen to the return ticket. We may lose it or we may over-stay the time limit. Or the man at the gate (the etherizer) may refuse to let us through to the return train. Or during our travels we may get a fatal pneumonia." He urges, therefore, local analgesia as the usual procedure—"no ether, formal exposure and injection of the large nerve trunks and temporary ligation of the main artery." In other words, safe analgesia and prophylactic hemostasis.

Considering, then, the comparative uselessness in shock, of strychnin, digitalin, nitroglycerin, alcohol, camphor, and the other much-lauded cardiac and vaso-motor stimulants, we must prevent the development of shock by avoiding the exciting causes of it. Loss of blood; excessive depth and length of anesthesia; loss of vital heat; prolongation unnecessarily of the operation; rough

**International Journal of Surgery*, February, 1907.

handling of tissues; certain especially susceptible regions; psychic causes.

Every drop of blood must be saved from the beginning. Crile has pointed out that 2 to 3 per cent of the body weight may be lost in hemorrhage without materially changing the blood-pressure. But the pressure is maintained at the expense of the nerve-vascular mechanism. Consequently, even a small amount of hemorrhage reduces the power to resist shock. This is certainly important. Anesthetics have made, it is true, more thorough, yet certainly slower operators of us. "May we not aspire," remarks John Collins Warren, "to add to modern skill the speed of a former generation?" Speed but not haste is what we need. Moynihan, in a paper read three years ago before the American Surgical Association put the matter very neatly thus: "Speed is essential, haste is often disastrous; the two should be distinguished. Speed should be the achievement, not the aim, of an operator. His work must be thoroughly done, but being so done, then the quicker it is done the better."

In shock our main reliance must be upon those measures that prevent its augmentation; artificial raising of vascular pressure by bandaging of extremities and abdomen, careful hemostasis, prophylactic or permanent, perhaps adrenalin, possibly ergot and, above all, the maximum of rest.

By correctly estimating the powers of our patient, avoiding all officious meddling, doing well, but quickly what must be done, having, as Sir James Paget expressed it, "the courage to do little," when more would be dangerous, having always in mind the first object of the humane operator, the saving of life rather than the performance of a successful operation, only thus may we, but not always, avoid witnessing on the operating table the sad spectacle of shock, when, as Gross graphically put it, "the machinery of life has been rudely unhinged."

DISCUSSION.

DR. PERKINS: I still think that infusion is of importance in combatting shock, even though Crile, whose work I have followed with interest, belittles it. In some patients it is difficult to differ-

entiate between collapse and shock. It is certain that saline infusion is of marked benefit in those conditions of lowered vascular tension coming on after prolonged operations. I must confess that Crile's rubber suit might be beneficial if it were immediately available, but because of its impracticability for general use, I believe it will never be very extensively used. A doctor from West Texas described to me a method of auto-infusion used by the plainsmen in cases of hemorrhage from the lungs, and I have used the method as an adjuvant in treating a case of shock in the hospital. It consists of bandaging three of the patient's limbs in such a way as to exclude blood from them and thus add their pro rata to the circulation of the trunk and head. At intervals of about fifteen minutes the bandages are changed, so as to rest each limb in turn. I believe thoroughly, also, in the value of full doses of strychnin and digitalin, say about 1-20 of a grain of each. The improvement in the patient's pulse and general condition which I have observed to follow the use of these drugs has been too marked to be doubted.

DR. PARHAM (replying to Dr. Perkins): I think our attitude towards shock, now and formerly, may be very well compared with that towards the mosquito theory as to the transmission of yellow fever. Professor Bemiss, in his article on yellow fever in Pepper's System of Medicine, mentions, for instance, the incident related by Dr. Shannon, of Ocean Springs, where he seemed to offer plausible evidence of the transmission of yellow fever through a letter. We believe this now to be practically impossible. Indeed, we think it would be a loss of time to go into a discussion of the subject. So it is with this question of shock. With the new ideas of the pathology of shock, as brought out by Crile in his experimental work, we now feel convinced that nitroglycerin, digitalis and strychnin, formerly thought to be very beneficial in the treatment of shock, cannot be regarded as advantageous; indeed, actually be harmful in a condition of pure shock. In collapse, from hemorrhage particularly, on the other hand, they may accomplish good because here there is merely a suspension of vasomotor function, and not paralysis, and the heart still responds to judicious stimulation. In the symposium on shock, at Johns Hopkins University several years ago, in which some of the leading surgeons and physiologists took part, the conclusions of Crile

seemed to be unanimously accepted, and Bloodgood relates that the demonstration, at the Lakeside Hospital at Cleveland, by Crile before the Clinical Society of Surgery, was absolutely convincing to all those present that pure shock was not to be benefited by these cardiac and vaso-motor stimulants. As to the rubber suit suggested by Crile, we can readily understand the advantages we gain by it, especially in operations about the head, where, with its use, patients may be put up at an angle of forty-five degrees, a very great advantage for this kind of operative work. The general blood-pressure is kept up by the rubber suit and the position favors a return of the venous blood to the heart, and thus two good objects are accomplished by the rubber suit. An interesting point has been brought out by Crile with regard to the influence of blood loss in the development of shock. He states that from 2 to 3 per cent of body weight may be lost by hemorrhage without affecting materially the blood-pressure, but this blood-pressure is maintained at the expense of the vaso-motor mechanism, so that subsequently when any cause of shock is at hand it becomes much more effective by reason of this previous blood-loss. He emphasizes, therefore, the necessity of saving all the blood possible from the very beginning of the operation.

As to what Dr. Delaup says about the sympathetic system, I would say that while his remarks about the anatomy are doubtless correct, still what we want to know in a discussion of such a subject as this is something more about the physiology of the sympathetic system.

DR. C. C. BASS read a paper entitled

Opsonins, Opsonic Index and Vaccine Therapy. Notes on the Principle, Technic and Application.

SCOPE OF PAPER: This paper is intended to call attention to some of the principles, technic and applications of opsonins and vaccine therapy as demonstrated by Wright and Douglas, which promises to materially aid the diagnosis and treatment of a few common and important diseases. It has been my good fortune recently to have acquired the technic and to have observed some of the work being done in Chicago, both in the private laboratory of Dr. J. C. Hollister who had just returned from Wright's Labora-

tory and in the Memorial Institute for Infectious Diseases, through the courtesy of Dr. Hektoen.

My only object in bringing out this early paper on the subject is to briefly explain the meaning of opsonins and vaccine therapy and the technic so we may have a clear conception of the fundamental principles of the subject and thereby be able to follow the results obtained by investigators all over the world, who are so enthusiastically taking it up. Nothing promises as much in medicine and surgery to-day as vaccine therapy.

I have some cases under treatment but none long enough to form opinions from, therefore my remarks will be based upon the work and cases of others.

OPSONINS: Opsonin is a term applied to substances in the blood fluid which have the property of preparing bacteria for phagocytosis. They are demonstrated by this simple experiment; leucocytes washed free from serum plus bacteria—no phagocytosis occurs. Washed leucocytes, plus serum, prompt phagocytosis occurs. This shows that the serum has the property of influencing phagocytosis. Now, if we add serum to bacteria, then thoroughly wash the bacteria free from the serum, these bacteria will be promptly phagocyted by washed leucocytes without the addition of serum which made them susceptible to or prepared them for phagocytosis. This something or substance which prepares bacteria for phagocytosis Wright has called "Opsonins," from the word "*opsono*," "*I prepare food for*." He showed that they existed in the serum of normal individuals in approximately the same amount. Also that there was probably a general or common opsonin and specific opsonins.

OPSONIC INDEX: An opsonic index simply says how many times the normal amount of opsonins there are in the patient's serum. We have no way of isolating and measuring them by weight or volume but we can measure them by comparison with the amount in normal individual's serum and we call an expression of the result an opsonic index. An opsonic index then of 1.5 would mean that the patient's serum contains 1.5 times as much opsonin as does normal serum. Or an apsonic index of 0.6 would mean that the patient's serum contains only 0.6 times as much opsonins as normal. Inasmuch as it is certain that opsonins are necessary before phagocytosis of at least most pathogenic bacteria can occur, a reduction of the amount of opsonins would reduce phagocytosis

or an increase of opsonins would increase phagocytosis, provided, of course, the number of phagocytes remained the same. We must not lose sight of the fact, however, that after a bacterium is taken into the body of a phagocyte it may not be killed. Still other factors come into play before the organism is destroyed.

Technic of Opsonic Index: Briefly stated, to obtain an opsonic index, equal quantities of washed leucocytes, emulsion of bacteria and serum are mixed, incubated for a definite length of time, generally 15 minutes, after which the mixture is blown out on a slide, stained, and the average number of bacteria per leucocyte ascertained by counting, say 50 or 100 polymorphonuclear neutrophils. Another specimen is run through exactly in the same leucocytes, same emulsion of bacteria, but the serum of a normal individual or preferably the mixed sera of several normal individuals. This is counted as before, and the index obtained by dividing the average per leucocyte in the patient's serum specimen by the average number in the normal serum specimen. Anyone ordinarily conversant with the use of the microscopic blood examination, and bacteriology can easily acquire the technic. It is easy but long and requires much accuracy of many details to get correct figures.

The technic in more detail is about as follows:

Washed Leucocytes: A few drops of blood from anyone are allowed to flow into a centrifuge tube containing 5 to 10 c. c. of 1.5 per cent sodium citrate in .85 per cent sodium chlorid solution. The tube is inverted a few times to mix well, then centrifuged until the blood cells are thrown to the bottom. The sodium citrate prevents coagulation by throwing out of solution the calcium salts. The supernatant fluid is removed with a pipette and the blood further washed once or twice with sodium chlorid sodium. The object of the washing is to get rid of the serum and opsonins normally present. The upper layer of the blood sediment will be gray and contains many leucocytes. This gray film is pipetted off and thoroughly mixed in another tube and used for washed leucocytes.

Emulsion of Bacteria—The emulsion is made with normal salt solution, except with tubercle bacilli and gonococci with which 1.5 per cent salt solution is used. May use culture of T. B., sterilized by heating to 100°C. for one hour or use 'refuse from manufacture of Kochs' old tuberculin. This consists of dead T. B. in glycerin. They are washed free from glycerin and a small

quantity well ground up in a mortar with salt solution until a cloudy emulsion is obtained. This is centrifuged until the clumps have been thrown down. The supernatant fluid will contain bacilli fairly well separated. This may be pipetted off and further diluted if necessary. There is no standard for the emulsion. The thickness necessary is soon learned by experience. For T. B. it should be thick enough to give an average of 1 to 3 bacilli per leucocyte. With the other organisms 3 to 10 is satisfactory. For other bacteria than T. B. the emulsion is made by growing them on suitable culture media and scraping off with the platinum loop some of the growth and mixing thoroughly with salt solution by blowing in and out of a capillary pipette, fitted with a rubber bulb. The point of the pipette is held firmly against the bottom of the tube in which they are being mixed, which breaks up the clumps. Cultures of gonococci must be used as soon as growth is well started. Staphylococci may be 2 or 3 days old. Streptococci up to 1 week; *Bacillus coli*, 12 hours.

Serum—The serum may be obtained in any of the ordinary ways. A very convenient way is to collect the blood in little glass capsules, holding about 1-3c.c., made by drawing out a piece of glass tubing previously heated in a blowpipe flame. Each end is drawn out to a capillary tube and one end bent so it can be conveniently hung in the centrifuge to throw the clot to the bottom.

The blood is taken into the capsule promptly by capillary attraction when both ends are open. When sufficient blood runs into the capsule the straight end is sealed in a flame. As soon as coagulated the capsule is hung in the centrifuge, centrifugated a few minutes. Clot is thrown to the bottom and by breaking off upper round end with forceps plenty of serum is at hand.

Mixing and Incubating—Having washed leucocytes, bacterial emulsion, and serum, equal quantities of each are drawn up in a capillary pipette, fitted with a rubber bulb. This is easily done by making an arbitrary mark on the pipette, say 1 inch from end and allowing an air space between each of the fluids. Blow this back and forth on a slide until well mixed. Then draw it up into pipette, and seal the end, place in an incubator at 37° C. for 15 minutes or more, except for coliform bacilli (10 minutes) and gonococci (only 7 minutes).

Smears and Staining—Pipette is removed from the incubator, the sealed end broken off and contents blown out on a slide and with another slide smeared as in making ordinary blood smears. The specimen is now stained as any other specimen for tubercle bacilli, or as you would a blood examination for the other bacteria.

Wright's or Jenner's stain are satisfactory.

Counting—Count the number of bacteria in each of 50 or 100 polymorphonuclear leucocytes.

Divide the number in patients specimen by number in normal specimen and the result is the "Opsonic Index."

Accuracy of Results—This technic is practically the same as that devised by Leishman in 1902. There are some unavoidable inaccuracies, and indices obtained by this technic must be interpreted with an allowance of a possible error of $1\frac{1}{2}$ tenths or possibly 2 tenths above or below.

APPLICATION—Opsonic index may be employed to aid diagnosis in at least tuberculosis. Wright makes these suggestions. When an infection is walled off from lymph and blood circulation and localized as in furunculosis, acne, chronic gonorrhea, lupus, chronic tuberculosis, etc., the opsonic index is usually below normal.

Where, on the other hand, as in acute infections, immunizing substances from the bacteria are getting from time to time into the blood as in lung or joint tuberculosis the index may be above, at, or below normal, but is variable. If, on the other hand, the infection is in the blood stream, the patient is usually being over-vaccinated or over-poisoned and can never reach even a normal index. Here we find septicemia, acute infectious diseases, endocarditis, etc.

Diagnosis of Lowered Resistance to Tuberculosis in Tubercular families—It is possible also that the tuberculo-opsonic index may be of value in determining the resistance of members of a tuberculous family to tuberculosis or probably to indicate latent tuberculosis in this class. I have noted this in a case of a young woman who had two great aunts to die of tuberculosis, one brother had "white swelling," and she had "scrofula" when a child. She seems well, but her tuberculo-opsonic index is persistently below 0.8.

Whether this means latent tuberculosis or simply what we have called "lowered resistance," I am unable to say. At any rate, so

far as phagocytosis is concerned, it does mean that she could not resist as many tubercle bacilli as a normal individual could.

As a Control for Treatment—When a dose of vaccine, which consists of dead bacteria, is given a patient, as a broad general rule, his opsonic index is reduced for from a few hours to a few days, and to a degree varying according to the size of the dose given. This Wright calls the "negative phase." If the dose has not been too large this negative phase is followed by a rise which reaches higher than where the vaccine was given and remains up for a few days, then gradually comes back down. This rise and maintained high tide he calls the "positive phase."

If another dose of vaccine should be given during a negative phase it would be prolonged and continued vaccinations on negative phases would keep the index constantly low. If, on the other hand, no more is given until the decline of the positive phase begins, the next negative phase may not bring it nearly so low as the first one did. The second vaccination is followed by a still higher "positive phase." In other words, if proper doses are given at the proper time, as shown by the opsonic index, it can be kept at and above normal. As a matter of fact, this is often easily accomplished. Tubercle index may go as high as 2 to 3, streptococcus, staphylococcus, and pneumococcus may go to 4, gonococcus up to 5 or 6, *Bacillus coli* up to 8, *Proteus* up to 14 times normal.

APPLICATION OF OPSONINS BY PASSIVE HYPEREMIA—I cannot resist the temptation here to refer to opsonins as an explanation for much of the good done by Bier's hyperemia treatment, first called to my attention by Dr. J. C. Hollister of Chicago. He found the opsonic index of the pus and exudate from ulcers and sinuses much below that of the patient's blood serum. He then applied cupping and obtaining an exudate almost as rich in opsonins as the patient's serum.

Now, if one would raise the opsonic index of such a patient as high as possible, say even 5 times normal, he would be able to bring into and through the infected tissue fluid containing nearly 5 times the normal amount of opsonin. The bacteria would promptly be removed from the field by phagocytes.

VACCINES—*Tubercle Vaccine*—Koch's new tuberculin is used for tubercle vaccine. Dose, 1-1000 to 1-600 milligram.

Autogenous Vaccine—Autogenous vaccines are made for all other infections. They are made by isolating the organisms from the lesion in the individual case and growing it, usually on large agar slants. The colonies are washed off with normal salt solution and sterilized at the lowest temperature and for the shortest time at which the bacteria are surely killed, generally 30 minutes at 68 degrees.

The vaccine is now standardized by mixing in a pipette equal quantities of vaccine and normal blood, further diluted with salt solution and counting a small quantity. To do this blow out the mixture on a slide, make a smear and stain as in ordinary blood examination. Now count separately the bacteria and red cells in each of several fields of the microscope selected at random. Knowing the normal number of red cells per cubic millimeter of blood it is easy to calculate the number of bacteria in a given volume of the vaccine. This is preserved with $\frac{1}{4}$ per cent lysol, stored and handled under antiseptic precautions and from this stock bottle dilutions containing proper doses per c. c. are made.

Average Doses—Staphylococcus, 500,000,000. Streptococcus and Pneumococcus, 50,000,000. Gonococcus, 10,000,000 to 20,000,000. Bacillus Coli, 50,000,000 to 100,000,000.

GUIDE TO TREATMENT—The guide in treatment is to give a proper sized dose of vaccine just as each positive phase begins to decline. Clinical symptoms are not sufficient control of the vaccination. Therefore, it probably should be controlled by the opsonic index. No doubt further observations will enable us to fix doses and intervals between vaccination which will be safe and render the opsonic index less necessary than it is now.

CLINICAL RESULTS—As for the clinical results I will only say that with suitable cases of tuberculosis, staphylococcus, streptococcus, and gonococcus infections the results have been on the whole satisfactory and no doubt we are about to add another one to our short list of specific therapeutic agents.

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DISCUSSION.

DR. PARHAM: This opsonic work is extremely interesting to me. The matter has not been carried far enough by Wright and his followers to justify us in drawing definite conclusions, but enough has been done to indicate that a new field, and a very valuable field, has been opened up. The method has value diagnostically as well as therapeutically. An interesting case in the hospital, with which Wright is connected, might be mentioned here. The surgeons believed they were trying a case of abdominal tuberculosis, and actually operated on the case without material benefit. They, then, referred the case to Wright, who took the opsonic index, and expressed the opinion that the case was not one of tuberculosis. The man subsequently died. A post mortem examination revealed sarcoma. This work is so promising, and yet demands so much time and enthusiasm, that I believe that any one who is willing to devote himself to it ought to receive every possible encouragement from the medical profession.

DR. J. F. OECHSNER: During last fall it was my good fortune to see, with Drs. Painter and Leary, at the Good Samaritan Hospital in Boston, a number of tuberculous orthopedic cases, in which the opsonic indices had been taken. The uniformity of results was striking. In nearly all the cases, including Pott's disease, hip-joint diseases, etc., the index was below normal, .6 and .8. Noticing one of their cards in which the index showed nearly 3, way above the unit, I asked to see this patient. This case was one of very active tuberculosis, with multiple foci of infection and numerous tuberculous abscesses, bringing out the point which Dr.

Bass has made that in very active tuberculosis the index runs high above the normal.

Dr. Leary related an experience where one of his confreres brought to his laboratory a robust, healthy-looking friend, and asked what his opsonic index be taken; the case was thought a good one for establishing a standard. On getting an index below the normal, he felt that his technic must be at fault. On mentioning it to his confrere he was laughingly informed that the supposedly healthy individual had Pott's disease.

At the Good Samaritan, the doctors are now engaged in an attempt at immunization of those cases by the gradual injection of infinitesimal doses of tuberculin, and I am awaiting their report with a great deal of interest.

DR. NELKEN said that he was much interested in the subject of opsonic therapy, especially in its relationship to the cure of gonorrhea. Wright himself had not done much work with it along this line, but in a recent paper Uhlmacher of Detroit had reported a series of cases of gonorrhea and its complications where marked improvement or cure had followed the use of a vaccine prepared by himself. An interesting point in reference to the application of the opsonic theory of treatment to gonorrhea is that there seems to be very little normal immunity to gonorrhea. It is probable that in the vast majority of individuals, infection will occur if the gonococcus remains sufficiently long in contact with their urethral mucous membrane. So a normal or even higher opsonic index in reference to the gonococcus would hardly mean immunity.

Another interesting point which differentiates gonorrhea from other diseases in which the opsonic theory may apply is that the leucocyte does not apparently kill or injure the gonococcus. In fact, the organism seems actually to multiply within the pus cell nor is there any evidence that its pathogenic properties are interfered with in any way. The role of the leucocyte in this condition seems really to be a mechanical one, it serving as a carrier to remove the cocci from the tissues. Nor does it seem that gonorrhea when localized produces any systemic reaction or tend to stimulate the formation of antitoxins. It is well known that infection with this organism may be present for years without any

constitutional impression. Whatever may be the correct theory of opsonic therapy, however, it opens now an interesting field in medicine and one that may revolutionize the treatment of certain most obstinate diseases. Dr. Bass is to be thanked for bringing the subject so clearly before the society.

DR. STORCK: In an infant nourished from the breast, the opsonic index is higher than in those fed artificially.

DR. J. B. ELLIOTT, JR.: I have, heretofore, opposed the routine practice of giving tuberculin in cases of pulmonary tuberculosis because I had no method of telling when or when not to give the injection and believe I have seen harm done by its indiscriminate use, with the opsonic index as a guide, I feel that rational tuberculin therapy has come to stay.

MEETING OF MARCH 23, 1907.

DR. AMEDEE GRANGER read a paper entitled

On the Examination and Interpretation of X-Ray Negatives.

With the improvements being constantly made in the apparatus for the production of the X-rays and with perfected technic in its use, the field of usefulness of these rays as a diagnostic agent, both in surgery and medicine, has been greatly increased.

The chief aim of the best manufacturers of to-day is not to turn out outfits which are so simple in their construction that they can be handled by any one, but to keep in pace with the latest discoveries and advances in this science, and to make accurate and up-to-date outfits. Necessarily, these have become more complicated and their demands a greater knowledge of electricity and of the properties—physical, physiological and therapeutic—of the Röntgen rays. As a result of these advances, the importance of the X-Rays as a diagnostic agent is becoming more generally recognized by the medical profession, who have also begun to realize that to do competent X-Ray work the operator requires special training and manipulative skill.

EXAMINATION—We must become trained in the examination of the X-Ray negative, because no process of printing can bring out all the gradations in tone that appear on a good negative. Noth-

ing must be lost, even though it should show up indistinctly. Of course, the most satisfactory manner of making this examination is by viewing the plate in a negative illuminator or shadow box, placed in a dark or darkened room, an arrangement similar to the one which we have here to-night. The shadow-box consists, as you see, of a contrivance in which plates of different sizes can be viewed in different positions and at different angles, by a controllable reflected light. The arrangement is very simple and the intensity of the light easily controlled by means of a rheostat. The object of the paper is to soften and diffuse the light. The control of light is very important. Without it the details in very thin negatives would be lost. The light should be turned on very gradually and the differences in tone of the shadows carefully looked for and their contour, size, etc., noted. The advantage of being able to examine the plates at different angles will be appreciated by all those who have had experience in this line of work, as it often enables one to see slight differences in shadings, denoting abnormalities, which otherwise would have escaped the examination, no matter how minute. If we have no shadow box, the next best thing would be to replace a pane of glass in a window having a good and clear view of the sky by a piece of ground glass. When examining an X-Ray negative by this means, it should be placed against the ground glass window, if it is dense, and held away from it if thin, and should also be held at various angles. Still another and very satisfactory way is to hold a large piece of ground glass in front of an incandescent or other brilliant light and proceed with the examination of the X-Ray plate, as in the case of a ground glass window. In any case, the film side of the plate should be turned towards the light and it should be viewed from the glass side. In that manner, we examine a plate as we would a patient with the fluoroscope. The plate replaces the fluorescent spring with the image on it of a patient, placed between the light or tube and the plate or screen, as the case may be. By so doing, we establish a more accurate basis of comparison between our skiagraphic and our fluoroscope work. The shadows appear on the screen or plate, as the parts which cause them exist in the subject, that is, what is seen on the right side of the plate or screen, is on the right side of the subject, or vice versa. The fact that in a print the image would be

reversed, that is, have the appearance of a negative looked at the left side of the print, is no argument against the method or examination recommended above, because, as we have already seen, prints are never as good as plates and, on that account, they are not to be used except on exceptional occasions. Furthermore, plates alone are accepted as evidence in the courts.

INTERPRETATION. Before one is competent to correctly interpret an X-Ray plate, he must know and thoroughly appreciate:

First. That an X-Ray negative is a shadowgraph.

Second. The importance of the relative positions of the tube, the patient and the plate to each other.

Third. The necessity of being familiar with the appearance of radiographs of the normal anatomy.

1. The X-Ray picture is a shadowgraph. The X-Rays that reach the plate affect the film as do ordinary light rays. When we interpose between X-Rays and the photographic plates objects of different atomic weight, the heavier substances prevent the passage of the rays more than the light ones, and the film being unequally acted upon, shows not an image, but shadows of various tones. Precisely the same thing occurs when we skiagraph any part of the human body, composed as it is of structures of varying densities. The bones appear white on the plates, the other tissues vary in tone from light to dark grey. Therefore, a good negative would show not only foreign body, and engross pathological lesions of the skeleton, such as fractures, dislocations, but would also show changes in bone structure, the presence of callous, of effusions and exudates, tubercular involvements, etc.

2. The importance of the relative position of tube, patient and plate to each other. The X-Rays are given off as a cone of light from the target or anticathode of the tube, the most central ray, or ray of normal incident, produces a perfect shadow, that is, one without distortion; the further we get away from this ray, the more oblique the ray employed becomes, the greater the distortion of the shadow produced by them. From the above, it becomes obvious that that normal ray should be known, and that it should be made to pass through the center of the plate or part being examined. Besides, we must also know at what distance the tube was when the skiagraphs were taken, as the closer the

tube to the plate, the greater the shadow produced, and this enlarged shadow, although free from distortion, may become the source of error. The part should always lie as near to the plate as possible, because, first, the further away from the plate, the greater the shadow; second, the greater the angle it forms with the plate, the more distorted the shadow. For that reason, the hip and shoulder present unusual difficulties. No comparison of value could be made between the skiagraph of a sound hip taken while rotated inwards and that of an affected hip rotated outwards.

Dr. John Hall Edwards, in a highly interesting article in the September, 1906, number of the *Archives of the Röntgen Rays*, says: "As long as surgeons are content to accept the evidence of a radiograph taken under unknown conditions and by an unskilled operator, so long will mistakes be made and the way kept open for fraud and quackery."

"The value of the interpretation of the radiograph depends entirely upon the knowledge and experience of the expert who is asked to give an opinion, and a good opinion cannot be formed from viewing a radiograph produced from a Crook's tube held in an unknown position. A large amount of distortion is easily detected by anyone used to the examination of X-Ray pictures, but a small amount is frequently difficult to recognize, even by an expert."

3. A thorough and minute appearance of the human anatomy, seen with the X-Rays, is of paramount importance. Dr. E. W. Shenton, in an admirable article in the *Physician and Surgeon*, says: "The surgeon who relies on his anatomical knowledge to translate a radiographic appearance will find that he depends upon a broken reed." Possibly the most striking instance of this is found in the appearance of a normal knee-joint. We are immediately struck by the high position of the patella, accustomed to seeing it pictured in all text-books on anatomy as covering the joint. The epiphyseal line in children and young adults could be mistaken for fractures. The appearance of the pelvis of a young child, with the apparent separation between the pelvic bones, and the absence of the femoral head, all due to unossified cartilage, is striking. Another source of error could be made in the acromio-clavicular articulation. Unless the normal appear-

ance of joints and of bone textures of individuals, from children to adult life, is known, the diagnosis of pathological conditions becomes impossible.

When taking skiagraphs, I have been taught by experience, for each part of the body, what position of that part and what distance of the X-Ray tube give the best results, and I invariably take them under those conditions. Whenever, on account of disease or pain I find it impossible to skiagraph a part of the skeleton in what I term the normal position, I always, for comparison, skiagraph the same parts of the sound side, placing it as far as possible in the abnormal position occupied by the diseased bone. By adhering to these principles I have been able to establish comparisons and make correct interpretations which could not have been made otherwise.

Whenever possible, the part to be examined should be skiagraphed lying in two positions, which are at right angles to each other. The great importance of this, not only in locating foreign bodies and pathological conditions, but also in showing the extent of the latter, or the results of treatment or operation, will be plainly seen in the accompanying skiagrams.

No exception to this rule should be made when skiagraphing the hand. I know that the current practice is to take a palmar, then a dorsal view. Very little additional information is gained by the second view. In the case of foreign bodies in the extremities, when these are located in the bones, it can, as a rule, be told by the fact that they are surrounded by an area of rarefaction of the bony tissue. If the foreign body is more distinct and its outline sharper than that of the bone, it was closer to the plate, that is, it was lying between the plate and the bone.

(Numerous negatives illustrating the points made in the paper were shown.)

In conclusion, the successful interpretation of skiagrams can only result from an accurate knowledge of normal radiographs, careful and painstaking operative technic and experience in the reading of X-Ray plates, coupled with the careful weighing of the clinical evidence.

DISCUSSION.

DR. WM. M. PERKINS: It is unnecessary to emphasize further the necessity for close observation which Dr. Granger has brought out in his paper, but I desire to take this opportunity of complimenting Dr. Granger on his work in the X-ray department of the Charity Hospital. The work of the visiting surgeons at the hospital has been greatly facilitated by the improvements in the X-ray service since Dr. Granger has had charge. I would urge those of you who are interested in these matters to take the opportunity of looking over the collection of negatives now on file, and regret that the doctor has not had the time to show more of them here to-night. There are many plates which bring out clearly the necessity for more than one view to establish the pathological condition.

DR. E. S. HATCH: I think that Dr. Granger has given us a very interesting paper and shown some good examples of modern skiagraph work. I feel that the work of diagnosing fractures and dislocations by the use of the X-ray has now reached a very high plane, and that the work for the future is to bring up to that same high standard the differential diagnosis of bone diseases.

I shall have to differ with Dr. Granger in what he says about not being able to diagnose tubercular bone disease and osteomyelitis. I feel very sure that here we have one of the cases where the X-ray is of the greatest value, and in the plate shown here to-night I think that the diagnosis could not be in doubt.

It was a case of tubercular bone disease. If it had been osteomyelitis the spot in the negative would have been much darker and more circumscribed, because of the fact that the bone destruction is greater, and in these cases where the diagnosis is in doubt the process is limited to certain spots.

In difficult differential diagnosis the modern X-ray will help us out where, without its aid, we might be in doubt.

DR. N. F. THIBERGES The doctor's paper has been interesting and the pictures shown to-night indicate very clearly to what extensive use the rays can be put. I wish here to emphasize the fact that the usefulness of the X-rays in this line has within the last three years increased and been perfected in proportion to the

more and more limited field to which the therapeutic use has been narrowed.

A rich, expensive and a well equipped machine is necessary to make good X-ray pictures. This prevents the annoyance of repeating the seance or subjecting the patient to a prolonged exposure, thereby runing great risk of an X-ray burn. As I am no longer doing X-ray work I am in position to bring out the financial part and to urge a better remuneration for the work. The material considered, the expensive machines now, and the patient and long novitiate for this line of work cannot be too well repaid. One last remark. I think that for clinical use any individual part of an X-ray picture can be brought out as clearly and more easily by watching the point in toning. It is not as accurate as the negative, but to be sure it does not require the negative box and its attachment.

DR. JACOBY: I would like to show the aid which the X-ray gives to the surgeon. A case of sprain of the knee, which had been put up in plaster of paris twice in six weeks without any results. The head of the tibia showed some enlargement and a skiagraph was taken, which revealed a tubercular deposit in the outer half of the head of the tibia. The tubercular focus was removed and the patient made a good recovery, there being no interference with the function of the knee joint. A second case, of a similar nature, was skiagraphed immediately, and a tubercular spot seen in the center of the head of the tibia. Upon operation, in order to reach this spot, it was necessary to trephine through healthy bone, in order to remove the tubercular material. The third case was one of another physician, which I was asked to see. The fibula had been operated upon in several places for a tuberculous lesion. It had again broken open at the middle of the leg and he had determined to operate again. It was suggested, however, that a skiagraph be taken, which showed that the entire fibula was involved and that the removal of same would be necessary to give a good result. A fourth case was one of supposed dislocation of the right femur upon the ilium, which the skiagraph showed to be an old extra-capsular fracture, with extreme deformity.

DR. GRANGER, in closing the discussion, thanked those that had taken part. He stated that Dr. Hatch misunderstood him, as he

did not say that a diagnosis by means of the X-ray could not be made between tubercular bone disease and osteomyelitis. The fact is, that he considers the X-ray our best means of diagnosis between the two conditions, as illustrated in some of the plates exhibited this evening. But he did not agree with Dr. Hatch in his statement that the diagnosis could be based on the density of the abnormal shadow. In osteomyelitis the presence of necrosed bone and of canals bored through the bone substance by the pus in an effort to reach the soft part, clears the diagnosis. Prints are never as good as X-ray negatives; furthermore, the fact that they can be retouched and doctored, as brought out by Dr. Thiberge, bars them as evidence in all courts of law.

DR. HOMER DUPUY read a paper entitled

Favorable Effect of Trypsin in a Case of Laryngeal Epithelioma; Exhibition of a Case.

James O'Brien, white male, age 59. Personal history excellent, up to December, 1905, when he became very hoarse, which condition persisted during the rest of the winter and into the spring of 1906; he attributed it to a cold. On May 26, 1906, patient presented himself to me for examination. Laryngoscope disclosed a growth in the anterior commissure of the larynx. Its point of origin was subglottic and to the right of the median line. It was firm and pale in appearance, and in size approximated an averaged sized pecan. There was a shadow of doubt as to its neoplastic nature, and even with a negative history of syphilis, he was put on the iodide of potash, 50 drops three times a day and protoidide of mercury $\frac{1}{4}$ gr. for a period of four weeks, without any perceptible impression on the growth. He consulted another physician, and during June and July local treatment in the form of spraying was resorted to. He returned to me about August 4, 1906. The growth seemed to have increased and, in fact, protruded in the glottis anteriorly. Malignancy was suspected and thyrotomy advised.

On August 15, 1906, at the Eye, Ear, Nose and Throat Hospital, I opened the larynx by an external operation, and found a greater extension of the growth than was at first revealed by

the laryngoscope. The anterior third of the right true and false vocal cords were involved. The growth seemed to arise from the right ala of the thyroid cartilage, near the median line, along the anterior commissure. These involved structures were excised and thorough curettage practiced at the point of origin, over the cartilage. While I regarded the case as one of the intrinsic variety, that is, in which the neoplasm is limited entirely to the interior of the larynx, its situation, near the median line, made me fear recurrence on the opposite side. This actually occurred, and by the middle of September, 1906, a month after the operation, the growth presented on the left side and progressed rapidly.

A specimen of this growth, obtained at the time of the thyrotomy, was examined microscopically by Dr. John J. Archinard, who reported it to be epithelioma, polyhedral cellular arrangement. While I was seriously thinking of performing a total laryngectomy, I hit upon the idea of giving trypsin a trial. Before initiating this treatment, Drs. Gordon King, A. B. Gaudet, DePoorter and E. S. Keitz, severally, made laryngoscopic examinations. This was done to secure separate corroborative and impartial evidence in noting the progress of the case. The first injection of trypsin (Fairchild's) was made October 27, 1906, a whole ampoule being used. A whole ampoule, or 20 minims, was used at each injection during the treatment. After the thirty-seventh injection, trypsin was discontinued and holidin (extract of pancreas) given in capsules, 3 grs. each t. i. d., after a few days this was increased to 4 and 5 capsules a day. Holidin was thus given for 29 days. On January 21, returned to the trypsin, giving 11 injections during that month. On February 1 discontinued trypsin and returned to holidin, giving the same dosage. February 18 trypsin injection resumed, 12 injections being given from this date to March 4, when holidin was again taken, to March 21.

It will be noted that I alternated in the use of trypsin and holidin, the latter being given to reinforce the action of trypsin.

In all, to date, he has received 55 ampoules or 1100 minims, of trypsin; 290 capsules, or 890 grs. of holidin.

The injections were given hypodermatically, first in one arm, and then in the other, and so on, exclusively. No severe systemic reactions were observed which could be directly attributed to the

trypsin. During the first fifteen days of the treatment, there were temperature variations ranging from 99° to $99\frac{4}{5}^{\circ}$. Locally, the site of the injections sometimes showed some inflammatory reactions, without, however, any suppuration. The injections were usually followed by burning sensations, more or less severe in character, but evanescent in duration.

Now, as to the changes in the growth: On the 12th of November, 1906, 16 days after the first injection, the growth appeared pale and harder, and had distinctly diminished one-half in size. After this observation, with the exception of marked pallor, no further change appeared in the growth until December 7, 1906 (41 days after initial injection), when the laryngoscope showed it to have still further diminished, as it no longer protuded in the glottis, but remained sub-glottic. These alterations continued until about January 21, when the laryngoscope gave the grateful information that the tumor was no longer visible. This observation was confirmed by the visiting staff of the hospital.

It is now over two months without a sign of recurrence having set in, the remaining laryngeal structures appear normal. The patient naturally possesses a very husky voice, the result of a complete operative removal of the right vocal cord. His general condition is excellent.

Drs. Gordon King, A. B. Gaudet, DePoorter and E. S. Keitz re-examined the larynx March 22, and all concur with me that the tumor has totally disappeared.

The case presents some very interesting features: The situation of the growth in an accessible region brought it within a splendid field for frequent and exact observations. Its limitation to the inner structure of the larynx, without involvement of the related lymphatic glands, undoubtedly contributed to the favorable results. A thyrotomy disclosed the extent and malignant nature of the growth. Its rapid recurrence, the positive microscopic findings by Dr. John J. Archinard, and the laryngoscopic examinations of several competent witnesses, insure a correct diagnosis and safeguards the observed results. The absence of severe systemic reaction is worthy of note. It was the absence of these untoward effects, which Beard attributes to the toxin absorption, when the cancer cells are broken up by the trypsin, which made me desist from the use of the amylopsin preparations. We had

best consider this as only an apparent cure, further extension of time being required to confirm the brilliant clinical results thus far obtained. The case is reported on its own intrinsic merits. It certainly encourages the trial of trypsin in selected cases. In these pioneer medical applications we can only reach definite conclusions by the accumulation of personal experiences, and mine may be an incentive to others.

N. B. I will report further on this case, be the results favorable or otherwise.

DISCUSSION.

DR. J. J. WYMER: I have 15 cases under observation, and in two which have been under treatment since the beginning of January 1 I can report a marked change. In these two I was able to get the patients out of bed after ten injections. The appetite is good, hemorrhages stopped, discharge ceased and the patient is free from pain. The hemoglobin and red blood count in these two cases increased wonderfully. In the other thirteen I have not made sufficient progress to claim anything for the treatment.

Both of these cases were inoperable, carcinoma of the cervix, and since treatment the growth appears to have become free from nodulation.

DR. N. F. THIBERGE: In studying the literature on this subject, one is struck with the similarity of the preliminary reports on trypsin injection with those on X-ray cures. Not only is this true of the enthusiasm which the reports inspire, but the systemic effect of the X-ray and those of trypsin injection, are so identical that one asks himself if they do not possess something in common—if their warfare against malignant growth is not waged with the same arms. While the system is overcharged with trypsin products there results high arterial tension, albuminuria drowsiness, pain in back, nausea sometimes amounting to vomiting, so also after subjecting our patients to a prolonged X-ray exposure, they complain of the same symptoms. After a thorough search I find that the most satisfactory reports come from lupus and epithelioma cases, next from carcinoma, and least of all from sarcoma. This is also true of X-ray results.

The case of Dr. Wright is interesting to me because no amylop-

sin has been used hypodermically, though this is usually considered necessary to sweep out the after-products of trypsin from the system. As the patient took holidin, I suppose he had the benefit of its contained amylopsin that way. I think the reason that this amylopsin is so necessary is that besides being concerned in clearing the field of battle, it acts on the glycogen contained in considerable quantities in all malignant growths. It has been found that a growth is malignant in proportion to its contained glycogen, and that those regions which are usually richer in glycogen (as the breast, uterus, etc.) are more frequently the seat of malignancy.

Notice.

Meeting of the Board of Medical Examiners for the State of Texas.

The last meeting of the Board of Medical Examiners for the State of Texas (regular) for examination will be held in Austin, Texas, June 25, 26 and 27, 1907. This examination will be held in accordance with the old medical law of Texas and will be the last meeting of this board for examination, as the new medical law of Texas, *the one board bill*, becomes effective on the 13th day of July and under the provisions of this law applicants will only be permitted to appear for examination who are graduates from medical colleges of not less than four terms of five months each. For further information concerning this examination address the secretary.

S. R. BURROUGHS, M. D., President, Buffalo, Texas.

T. T. JACKSON, M. D., Secretary, San Antonio, Texas, Hicks Building.

N. O. Medical and Surgical Journal

Editorial Department.

CHAS. CHASSAIGNAC, M. D.

ISADORE DYER, M. D.

The Charity Hospital Alumni.

The Charity Hospital Alumni Association met in annual session on April 13. The attendance was larger than at any meeting in the last few years, and we were pleased to notice an increased interest on the part of the members. In addition to the address of retiring President Walet there was one by Congressman Robert Broussard. His theme was the greatness of Tulane Medical College and the brilliant future before it. We beg to dissent with him, however, on one point: that it is derogatory to the dignity of the University that its graduates should have to be examined by our State Board of Medical Examiners. He has failed to seize the essence of the reason for it. The licensing power of the State should be wielded by a body separate from the teaching body, whose salaries depend upon the revenues of the school. Besides, it is a loftier stand to take that our university graduates should be able and willing to pass any examination that the State shall deem necessary, and that the college should provide such a grade of instruction as shall make the examination merely a form demonstrating the lack of discrimination against graduates of other colleges.

The two points of greatest importance passed upon in meeting were in reference to the Charity Hospital itself, as was fitting on the part of its alumni. It was decided to continue the effort to obtain a third medical member on the Board of Administrators of the hospital for obvious reasons, particularly as there was a precedent for this increased representation of the medical profession on the board of an essentially medical institution, and it still would leave a majority of two to the lay members. It was also determined to appoint a committee for the purpose of petitioning the Board to give recognition to the visiting staff of the hospital through a consulting or advisory committee, not with

any authority, but merely for the purpose of making possible suggestions, and chiefly to put the staff in direct touch with the Board.

The Relation of the Hospital to Medical Education.

It is exceptional to find any hospital of distinct standing and position without affiliation with a teaching institution. Where the exceptions occur, the leading men associated with such institutions still occupy the position of educators in that they are usually sufficiently broad minded to place their talent at the disposal of fellow practitioners. In New York, where good hospitals are numerous, the surgical service of most of these is regularly thrown open to the medical profession simply upon presentation of a personal card. The bulletin at the New York Academy of Medicine carries a list of such institutions with regular notices announcing the days of operations and the proposed procedure. The surgeons identified with this method are, for the most part, men occupying professorates in the several medical colleges of New York, but frequently the occasion is afforded them to extend the usefulness of the institution outside of its actual connection with the college.

The liberal method of hospital administration which recognizes the visiting medical and surgical staff as supremely interested in the success of the institution, of course, is the most important explanation for the prevailing custom, a custom which, as yet, has been impossible of performance in New Orleans, where ancient methods still prevail.

The history of the Charity Hospital, in New Orleans, and its success as an institution point conclusively to the fact that whatever of record it has made in the past has been due almost directly to the individuals who have been at various times connected with the hospital, and at the same time with the teaching faculties of the several medical schools which have from time to time been identified with it.

The fact that the Tulane Medical Department has been associated with the institution since 1834, under its various titles, makes it reasonable to believe that the members of the faculty of this school have stood out in the historical survey. That these

men have actually accomplished results of record stands very strongly for their individual force, as the opportunities have consistently grown less as the years have gone by and it has required the peculiar personal equation to establish results in the face of the system prevailing at the hospital in its arrangement of medical and surgical work.

It is not necessary for the JOURNAL to prophesy the future development of the city of New Orleans, nor to argue that the usefulness of a public institution, such as the Charity Hospital is and must be, will increase as the growth of the city is augmented; we feel, however, that in relation to medical education the importance of this institution should at no time be underestimated. Up to the present time something over 6,000 medical students have passed under the ægis of the Tulane Medical Department, and each of these has travelled through the wards of Charity Hospital, deriving material profit, and it is quite certain that every one so instructed has remembered the advantages and difficulties which have offered in the way of availing of the material to be had.

As a medical center New Orleans is entitled, at this time, to distinct recognition, and the amount of scientific work which has matured during the past fifteen or twenty years has deserved the popular high estimate which it has derived.

The JOURNAL proposes at every opportunity to appeal to the intelligent support of the medical profession in the city of New Orleans and throughout the State to the end that the relation of the hospital to the public welfare and to medical education shall be made the prime objects of the institution. It is timely, therefore, that radical changes in the methods of administration should be brought about to further these ends, and when the discussion is provoked to the point of legislative action we feel that the past record of the profession of New Orleans who have upbuilt the reputation of the Charity Hospital and of the Tulane Medical Department, which has contributed most largely both in its usefulness and in supplying the members of the profession who have accomplished these results, shall be made to profit some by the changes which the evolution of natural demands must bring about.

The Louisiana State Medical Society.

The Louisiana State Medical Society held its twenty-eighth annual meeting at the Richardson Memorial Building of the Medical Department of the Tulane University of Louisiana, on Tuesday, Wednesday and Thursday, May 14, 15 and 16, 1907.

Generally speaking this was the most successful gathering the Society has ever had. The scientific work was of high order, the discussions full of merit, and the attendance the largest in the Society's history. Among the guests of the occasion were Professor Wm. S. Thayer, of Johns Hopkins University, and Professor Wm. A. Evans, of the University of Illinois, and also a graduate of Tulane Medical Department, both of whom contributed valuable papers. Dr. R. S. Curry, the President, and Dr. E. F. Howard, the Secretary of the Mississippi State Medical Society, and Drs. W. E. Parker and E. H. Martin, of Hot Springs, were also present.

The first day's session was notable for the attendance and the meetings opened promptly. Dr. Henry Dickson Bruns, the President, especially noted the needs of revision and provision in our laws regarding experts, the destruction of St. Tammany pine forests, and the Medical Practice Act. He also considered the matters opportune to the question of present medical education and its standards.

Secretary P. L. Thibaut reported that forty parishes in the State had organized in accordance with the regulations of the State Medical Society, and that in accordance with the recommendations of the State Society the Board of Administrators of Tulane had admitted to its membership a member of the State Medical Society in the person of Dr. F. W. Parham.

Treasurer Lazard reported a balance of \$1,560.28 in the treasury, but called attention to the fact that expenditures were beginning to exceed receipts, and that an increase of dues seemed advisable. The following parishes were dropped from the rolls for non-payment of dues: Caldwell, Concordia, Jackson and Washington.

Dr. E. J. Graner, councillor for the Second Congressional District, reported that there were 693 medical practitioners in the Parish of Orleans, of whom 662 were provided with diplomas.

Drs. C. M. Sitman, of the Sixth; J. L. Scales, of the Fourth, and S. L. White, of the Fifth, councilors for their respective congressional districts, also made reports covering the status of the profession in their several jurisdictions.

The Committee on Medical Legislation, through Dr. Chas-saignac, the chairman, made a report touching the efforts of the committee to pass a bill regulating the practice of medicine in the State. He said a majority of both houses favored the bill, but its defeat was encompassed in the State Senate, where it was loaded down with objectionable amendments that rendered its withdrawal expedient.

Dr. Callan, chairman of the Committee on Medical Education, read an important report dealing exhaustively with the status of medical education in Louisiana. Among the points brought out were statistics for the years 1905 and 1906. In the former year it was shown that seventy-one graduates of the Medical Department of Tulane University appeared before ten examining boards in different States and evidenced a record of failures of only 5 per cent. In 1906 ninety-one graduates appeared before thirteen examining boards of different States and showed failures of a trifle over 11 per cent, a record comparing favorably with that of any of the great medical schools of this country.

The announcement of the future policy of standard requirements at Tulane indicated the intention to conform to the recommendations of the American Medical Association, which stipulates that each teaching session shall cover not less than thirty weeks of thirty hours each. The last session of Tulane extended over a period of twenty-nine weeks of thirty-one hours each. This feature of the report met with the enthusiastic reception of the members assembled.

The committee commented favorably on the announcement recently made by the Tulane Board of Administrators touching the inauguration of the following new chairs in the Medical Department: Orthopedics and Surgical Diseases of Children, Biology, new divisions of Chemistry, separation of the present chairs of Physiology, Pathology, Anatomy, Obstetrics and Diseases of Women.

The committee recommended that the Committee on Legislation consider the advisability of expanding the present office of State Board of Medical Examiners so that they should be authorized by legislation to examine intending medical students to determine their qualifications in elementary education before they are allowed to matriculate at any medical school in the State.

Various reports of miscellaneous order were also entertained when the Society adjourned about noon to lunch at the New Orleans Polyclinic.

In the afternoon of the first day papers in the Section on Medicine were read, covering a wide range of subjects. The discussions were full and free, and at times lively.

The feature of the night session was the paper by Prof. Thayer on "The Importance of Physical and Psychical Therapeutic Methods", which touched on the advance in methods in medicine and discussed in comprehensive analysis the prevailing practices.

In appreciation of the compliment paid the Society by this contribution and his presence at the meeting, Dr. Thayer was elected an honorary member by unanimous acclamation.

After the reading and discussion of other papers the Society adjourned, the country members being the guests of the Chess, Checkers and Whist Club, at a smoker, which courtesy was much appreciated.

The second day morning session convened promptly and was chiefly devoted to the technical program, no mention in detail being here noted, as the papers with discussions are to be published later.

The noon recess was pleasantly spent at luncheon in the College building, under the auspices of the Tulane Medical Department.

The leading feature of the afternoon session was the paper on "Serums in the Diagnosis and Treatment of Tuberculosis", by Prof. Wm. A. Evans, of the University of Illinois. The paper was received with marked attention and might be classed as exhaustive as it was comprehensive. The contribution of Dr.

Evans must go a long way towards establishing the value of the various sera in tuberculosis, especially for diagnosis. The thanks of the Society were voted Dr. Evans, and he was made an honorary member by unanimous acclamation.

The balance of the afternoon session was devoted to various papers in the Medical and Surgical Sections.

At the evening session the members of the Society and the invited public were treated to two remarkable addresses, the first the annual address of the President, Dr. Henry Dickson Bruns, who was followed by Rev. Emanuel De Lamorinière, S. J. Dr. Bruns presented an academic paper dealing with the heroes of the profession, detailing the life history of famous physicians for the last six or seven centuries, naming each of those men who had marked the epochs of medical and surgical advance. Father De Lamorinière displayed his usual oratorical talent in discussing the relation of the physician to religion. Aside from the tribute paid to the two professions he discussed some of the erroneous attacks made upon the church in its influence in early medical advance. The argument of his address pointed to the early influence of religion in the development of the medical profession, naming the Great Master in his direction of the healing of the sick.

The appreciation of the Society was indicated by the election of Father De Lamorinière to honorary membership in the Society.

The Society concluded its meeting on the third day, the morning being devoted to the reading and discussion of various papers. Of chief importance, aside from this, was the presentation of the report of the nominating committee, which was first voted upon seriatim and then adopted by the Society as a whole. The recommendations of this committee were as follows:

President, Dr. Oscar Dowling, of Shreveport; First Vice President, Dr. L. Lazaro, of Washington; Second Vice President, Dr. M. J. Magruder, New Orleans; Third Vice President, Dr. R. B. Paine, of Mandeville; Councilor for Fourth District, Dr. J. L. Scales, of Alden Bridge; Councilor for Fifth District, Dr. E. Dunbar Newell, of St. Joseph; Councilor for Sixth District, Dr. C. M. Sitman, of Greensburg; Councilor for Seventh District, Dr. R. O. Simmons, of Alexandria; Alternate to American Medical

Association for one year, Dr. A. J. Perkins, of Lake Charles; Delegate to American Medical Association for two years—Dr. Charles McVea, of Baton Rouge; Alternate Delegate to American Medical Association for two years, Dr. W. W. Butterworth, of New Orleans. Recommended for appointment by the Governor to the State Board of Medical Examiners: Either Dr. J. G. Martin, of Lake Charles, or Dr. C. J. Gremillion, of Alexandria.

Next Place of Meeting—Alexandria, the fourth Tuesday in April, 1908.

Considerable dissatisfaction was expressed by a number of the members present over the failure to accomplish the reading of the papers as arranged on the program, certain sections having been omitted in their proper order, most of the time having been devoted to the Medical and Surgical Sections, and a large number of the papers listed having failed to be called at all. Under a proper resolution the Chair was instructed to appoint a special committee which should consider the defects in the program, with a view to improving upon the conditions for the coming year.

The afternoon session was a mixed session of unfinished business and scientific papers, chiefly notable among the latter being the paper by Dr. Edmond Souchon, who presented a number of beautiful anatomic specimens prepared by a method elaborated by himself and his son, Dr. Marion Souchon. Dr. Edmond Souchon was deservedly elected an honorary member of the Society by unanimous vote.

Following the suggestions offered by the President in his report the Society adopted these resolutions, which were presented by Dr. Dyer:

"WHEREAS the consistent criticism attaching to medical expert testimony generally would indicate the need of reform regarding the qualifications for such, and

"WHEREAS the medical profession, the legal profession, and above all, the public are interested in a relief of present conditions,

"*Be It Resolved:* That the Louisiana State Medical Society, through its President, first, name a committee to specifically consider the advisability of legislating regarding the same, and, second, that the Louisiana Bar Association be requested to appoint a similar committee to deliberate with the committee from the State Medical Society in order that a deliberate recommendation be made on the part of both the Louisiana State Medical Society and the Louisiana Bar Association to the Legislature of the State of Louisiana."

Further resolutions were adopted thanking the various clubs of New Orleans, the Medical Faculty of Tulane University, the N. O. Polyclinic and the Orleans Parish Medical Society for appreciated courtesies.

The meeting concluded with the induction of Dr. Dowling and his associates in office, the new President making a happy speech of acceptance in which he expressed the hope that the recent Tulane graduates would fall in line and, further, that as the present meeting was the most successful in the history of the Society, the attendance aggregating 364, he expressed the hope that Alexandria would show an attendance of over five hundred.

The JOURNAL feels that a final note of congratulation should be tendered the presiding officer, the chairman of the committee of arrangements and the entire membership of the Society upon the conclusion of a most successful meeting which in the papers presented, the discussions and the united sentiment, showed the success of this particular professional organization.

The banquet tendered the visiting members by the Orleans Parish Medical Society was held at the Atheneum and proved in every way a success. About the middle of the repast Dr. J. J. Archinard, the President of the Orleans Parish Medical Society, in a very happy speech introduced the toastmaster of the evening, Dr. Homer J. Dupuy, who from time to time presented the following speakers, with their toasts:

Dr. Oscar Dowling eloquently responded to the toast of "Union and the Medical Profession"; Dr. T. J. Finley to the toast of "Woman; God Bless Her"; Dr. Henry Dickson Bruns, "The Duties of the Physician to the Public"; Dr. J. M. Barrier, "The Country Doctor"; Dr. J. M. Batchelor, "The City Doctor", and Dr. L. Lazaro, "The Cajun Doctor." Among the notable addresses of the evening, aside from the broad appeal of the retiring President, may be mentioned the impressions of New Orleans as expressed by Prof. W. S. Thayer, the forcible speech of Dr. E. B. Craighead on "The Educational Outlook of the South", and, finally, the response of Mr. Nathan Picard, of the Times-Democrat to the toast of "The Press". The toastmaster introduced Mr. Picard as the "Mark Twain of New Orleans", and his happy responses to the banquet committees in the past in serving as the

humorist of the annual meetings of the profession at the festive board entitle him to some such pseudonym. Mr. Picard, among other things, said:

Somebody is credited with the statement that after a man has passed the age of 40 he is either something of a physician or a born fool. With due humility I desire to amend that statement with the observation that after a man has survived three annual sessions of the State Medical Society and three of its banquets, he either knows something of medical science or is a hopeless idiot.

I understand that in Great Britain all that is necessary to obtain a diploma as an attorney at law is to attend three courses of dinners at the Inns of Court. If this rule of the mother country applies here and in a sister profession then by all that is just and reasonable I am entitled either to full or probationary membership in the medical profession. I have attended three annual meetings of the State Medical Society, and held my ground like Casabianca on the burning deck whence all but I had fled. To leave no loop hole of omission in support of my pretensions I have prepared a thesis upon which I hope to ride down the corridors of medical fame. Quite logically I chose an easy subject, though somewhat abstruse and recondite. It has not been even remotely referred to in your deliberations, and even the medical dictionaries contain but meagre reference to it. So I am not without hope that my investigations in this field of original research may entitle me to a hearing from the Board of Examiners.

The subject of my thesis is a dissertation upon the diagnosis and treatment of "Chambermaid's Knee", illustrated with 25 slides taken upon the spot from a live subject and at some future time to be projected upon a screen. It is proper that I should state that my investigations have not been confined to the original focus of infection, but have embraced circum-adjacent territory more or less remote. This course has been rendered necessary by the difficulty of diagnosis, the complaint being sometimes confounded with peri-arthritis. It is only the experienced practitioner who can differentiate between them. The treatment is simple when properly applied, and is somewhat osteopathic in its nature. It consists of rest, massage and hot air, especially hot air. I regret to state that the results are not uniform, but conflicting. Where the practitioner is young and good looking the results are noticeably positive to an overwhelming degree. When the practitioner is old the results are negative to an alarming degree, and the older he is the more negative they become. When the practitioner has passed his climacteric, the results are absolutely nil.

I regret to say that the treatment of this infirmity is so interesting that the average practitioner is apt to suspect its presence where it does not exist and to diagnose for it on the slightest provocation. If it should ever become epidemic and extend to other feminine occupations I tremble for the peace of mind of the profession.

It was brought out in one of your discussions that an excitable operator may under certain conditions take out the wrong eye. This suggests an alarming possibility. Supposing an excitable practitioner, suddenly called upon to treat chambermaid's knee, should make a mistake and pull the wrong leg.

In reviewing your late session I am bound to bear testimony to the fact that it was full of consolations. One paper emphasized the great truth that there is no cloud without a silver lining. It taught me that there were compensations for all things. Even chronic valvular heart disease, plus arterio sclerosis, has its compensations. When the com-

pensation is good the patient has a fair chance for recovery; when it is broken, his chances are desperate. I have not yet been able to determine whether the author of that able paper in speaking of compensation referred to his fee or the patient's condition.

Another thing that impressed me profoundly was Dr. Dupaquier's joyous patient, who was troubled with alternating attacks of epilepsy and iodide of potash, with syphilis for a side line. The recollection of this subject and its demonstration will be to me a perennial source of interesting speculation. He reminded me of the doctrine of predestination:

You may or you must,
You will or you wont,
You'll be damned if you do
And damned if you don't!

It is to the eternal credit of medical science and a tribute to Dr. Dupaquier's skill that this incomparable patient is getting well. If he is ever completely cured he will never forgive the good doctor. To his dying day he will regret the busy time he had blithely oscillating between epilepsy into syphilis, by way of rest cure.

I was disappointed during the discussion of Hot Springs waters that no allusion was made to hasty diagnosis that sometimes occur at that sporty health resort. I know of one doctor who, after writing his prescription, said to his patient, "Now remember, one cigar a day, no more." A few days afterward the patient reported. "Well," said the doctor, "how did the medicine and baths agree with you?" "The medicine and baths are all right," replied the patient, "but I can't get used to that cigar. It makes me awful sick." And it was only then that this bright physician discovered that his patient had never smoked before.

Gentlemen, why don't some of you write a paper entitled "The Mistakes I Have Made, or the Physician as the Advance Agent of the Undertaker." Dr. Trahan acknowledged the corn when he said, "I follow my patients to the grave." This reminds me of the old fellow referred to to-day by Dr. A. J. Perkins, who, when requested to select a physician between allopaths and homeopaths and other "paths" declared himself indifferent, as all paths led to the grave. That man was a pronounced pessimist and deserved no sympathy, but my heart goes out to the man who can face death with a smile on his lips and laugh over his own dissolution. Such a man was the patient, who, having been informed by his physician that he had had two strokes of paralysis and a third would be fatal, smiled up in the doctor's face and said: "Looks like a case of three strikes and out, doesn't it, doctor?"

The harmless pleasantries I sometimes indulge in at the expense of the medical profession I beg to assure you are merely love taps, for I have the profoundest esteem for members of that calling, and more especially for those of the Louisiana State Medical Society, an esteem cemented by the most cordial of personal relations. Indeed, hasty investigations of medical literature made in a snapshot preparation of this toast, have caused me to feel proud of the medical profession of my country, and particularly that unpretentious branch of the same known as the physicians, as contra-distinguished from the surgeons. On this subject I have the authority of no less a person than the late eminent scientist, Dr. Huxley. Speaking of the existing system in England, under the operation of certain licensing boards which give a qualification for an acquaintance for medicine or surgery alone, and which more or less ignores obstetrics, he said: "This is a revival of the archaic condition of the profession when surgical operations were mostly left to barbers and obstetrics to midwives; when physicians thought themselves and were considered by the world the superior persons of the profession. I remember a story

current in my young days of a great court physician, traveling with a friend who fell down in an apoplectic fit, and refused to bleed him because it was contrary to professional etiquette to perform that operation."

To show in what contempt the physicians of England are held by the surgeons, Dr. Huxley tells this story: "A famous English surgeon was asked whether he intended to bring up his son to his own calling. His answer was, No, I did have such an intention but I have discovered that my son is a darn fool. and so I mean to make a physician of him."

Of course, this story has no general application in Louisiana, especially in sparsely settled districts, where the medical practitioner is called on nearly every day to perform the combined function of physician, surgeon and midwife, and performs all of them well, and right here, if you will permit me, I wish to take issue with an expression advanced at your yesterday's session. When Dr. Newell read his able paper on country surgery, it was suggested that his paper was so good, that its author would probably find it profitable to move to the city in search of a wider field for his decided ability. Against this expression I wish to register my emphatic dissent and to indulge the hope that young men like Dr. Newell will multiply a hundredfold and stick to the country, and by dint of their example raise the standard of professional emulation so high, that country patients in need of skilled surgery will not have to turn to New Orleans for aid, but will find competent surgical skill at home. The country needs such young men. Tulane is turning them out every year to scatter the seeds of high aspiration at every cross road in this State. That's what Tulane is for, to encourage high ideals; that's what the State Medical Society is for, and by their joint action I look forward to the day when the country doctor and the city doctor will march side by side on equal terms, and shoulder to shoulder, battling with disease and death with equal equipment.

Gentlemen, it may surprise you that I come here every year, and read from manuscript instead of speaking off hand. I have two reasons for this: a wholesome dread of the critical proclivities of doctors, and a poor memory.

And Mr. Picard concluded with an amusing story which only added to the applause and laughter which had marked his speech throughout.

Medical News Items.

THE NEW ORLEANS COLLEGE OF DENTISTRY held its annual commencement on Tuesday, May 14, at the Crescent Theater, and twenty graduates received their degrees. Dr. E. B. Craighead, the President of Tulane University, delivered the annual oration, and paid a glowing tribute to the American dentist and the debt of gratitude which the world owes to him. This comparatively young institution has taken an established position in the com-

munity, and the JOURNAL joins its many friends in an expression of congratulation upon the successful conclusion of their session.

THE NEW ORLEANS COLLEGE OF PHARMACY celebrated its seventh commencement at the Tulane Theater on the night of May 14. Fourteen diplomas were awarded and the speaker of the occasion was the Most Reverend Archbishop Blenk. Considerable stress was laid by the official speakers of the occasion on the elevation of the pharmacist and his profession.

TUBERCULOSIS A REPORTABLE DISEASE. The City Board of Health of New Orleans by a recent resolution has placed tuberculosis on the list of reportable diseases. The matter has excited considerable criticism and discussion in the daily press, but the weight of opinion seems to favor the action of the City Board.

The recent conference of the Louisiana Health Officers at Opelousas indicated that this step was desirable and Dr. W. T. O'Reilly, the President of the City Board, inaugurated the step. The arguments submitted are that this will permit a more exact consideration of the methods of control of this disease which, until now, has claimed 30 per cent of the mortality of New Orleans for its victims. With the aid of the Anti-Tuberculosis League the public may be educated at an early date to the necessity for such steps which should result in a general improvement in the status of those who suffer from this disease.

THE MEETING OF THE STATE HEALTH OFFICERS AT OPELOUSAS on May 2, 3 and 4 proved a great success. Inaugurated under the auspices of the State Board of Health this movement was in the direction of educating the people of Louisiana in health matters with reference to the particular diseases in the human subject which now add to the mortality list. A mass of papers on several subjects were presented, most of which were reproduced in the daily papers. The movement is one to be encouraged and the JOURNAL trusts that the success of the meeting here chronicled may lead to many more of like character and like success.

THE NEW YORK MEDICO-LEGAL SOCIETY at its May meeting discussed proposed reforms in medical expert evidence, the basis of the consideration being the bill recently proposed in the State of Maine, the text of which follows:

An Act Relative to Expert Evidence.

Be it enacted by the Senate and House of Representatives in Legislature assembled, as follows:

Section 1. In any case, civil or criminal, in the supreme judicial court, or any superior court, when it appears that questions may arise therein upon which expert or opinion evidence would be admissible, the court, or any justice thereof in vacation, may appoint as examiner one or more disinterested persons qualified as experts upon the questions. The examiner, at the request of either party, or of the court or justice appointing him, shall make such examination and study of the subject matter of the questions as he deems necessary for a full understanding thereof, and such further reasonable pertinent examination as either party shall request. Reasonable notice shall be given each party of physical examination of persons, things and places, and each party may be represented at such examinations.

Section 2. At the trial of the case either party or the court may call the examiner as a witness, and if so called he shall be subject to examination and cross examination as other witnesses. For his time and expenses incurred in the examination and in attending court as a witness he shall be allowed by the court a reasonable sum, to be paid from the county treasury as a part of the court expenses. The court may limit the witnesses to be examined as experts to such number on each side as it shall adjudge sufficient for an understanding of the contention of the parties on the question.

Section 3. When upon the trial of any case in either of said courts questions arise upon which expert or opinion evidence is offered, the court may continue the case and appoint an examiner for such questions as provided in Section 1.

Section 4. In all cases in said courts where a view by the jury may be allowed, the court, instead thereof, may appoint one or more disinterested persons to make the desired inspection in the manner and under the same rules and restrictions as in the case of a view by the jury. The viewer thus appointed may be called as a witness by either party or by the court, and shall be subject to examination and cross examination like other witnesses. He shall be allowed by the court a reasonable sum for time and expenses incurred, to be paid by the party asking for the view and taxed in his costs, or to be paid by the county as a part of the court expenses, at the discretion of the court.

PASSED THE STATE BOARD MEDICAL EXAMINATION. The following doctors passed the examination before the Louisiana State Board of Medical Examiners on May 9 and 10, 1907:

The white persons who passed are: C. A. Thomas, J. M. Bonnette, J. L. Smith, R. A. Lambert, M. E. Saucier, H. L. Cockersham, J. N. Jones, M. A. Smith, W. A. Stevens, H. M. Lyda, J. B. Hirsch, S. H. McMahon, T. Gouaux, S. E. Frierson, J. K. Griffith, A. A. Herold, L. B. Hudson, T. Y. Greet, L. H. Landry, S. J. Mayeux, H. Daspit, Jr., B. Z. Welch, A. M. Caine, J. F. Cazayoux, R. A. Strong, C. F. Chaff, G. A. Ozenne, A. A. Daniel, O. N. Arrington, Louis Sequeira, M. M. Collins, L. Caboche, M. A. Estep, Sam Alman, R. E. Hale, T. C. Moody, Mrs. A. Christine Schwing Kiblinger, M. Boudreau, W. S. Sharp, J. L. Kelly, F. H. Mecon,

J. W. Chisholm, J. M. Smith, I. B. May, T. J. Tribble, J. E. Crawford, H. S. Bennett, B. T. Wise, Jr., W. F. Wade, F. R. Singleton, E. A. Frechet, D. P. de Bellard, P. M. Godchaux, J. J. Gill, H. L. Garland, A. J. Heatherington, W. H. Harris, D. E. Brown, G. W. Smith, T. C. Hightower, C. C. Colvin, G. W. Stephens, P. H. Scardino, E. C. Day, L. T. Donnelson, Randolph Lyons, C. E. Allard, H. A. Greenwood, R. E. Smith, A. B. Childs, A. P. Crain, T. W. Young, C. E. Jacobs, W. R. Strange, D. G. Lemkowitz, T. E. Royals, L. J. Breaux, Joseph Welch, J. F. Figueroa, A. P. Levin, C. J. Edwards, Jr., J. W. Montgomery, T. M. Brister, S. C. Fittz, C. M. Jarrell, J. E. Kornegay, J. W. Brock, C. E. Woods, Isadore Cohn, J. W. Darby, Victor Painchaud, G. H. Upton, O. J. Richardson, A. J. Hodges, G. P. Garland, C. M. Hartzog, H. O. Taylor, L. A. Wilkinson, Ralph Reagan, J. O. Gurney, A. J. Hefton, F. C. Sheppard, E. W. Horton, J. L. Holliday, M. W. Swords, J. K. Phares, C. G. Craighead, S. M. Brian, V. Jastremski, O. C. Dunsworth, W. H. Huckaby, R. L. Segrest, R. P. Thaxton, A. S. Reisor, H. M. Allen.

The negroes who were successful in the examination are: J. R. Spars, J. H. Murray, L. J. Baker, G. W. Lucas, R. Vining, R. L. Figgins, W. A. Heed, T. J. Welch, J. L. Johnson, C. B. Wickham. Females: Ella Pescud, S. S. Turned and M. D. Gayden.

GRADUATION EXERCISES OF THE TULANE MEDICAL DEPARTMENT. The Tulane Medical Department held its graduation exercises at the Tulane Theater on Wednesday, May 8, and degrees were conferred on 91 graduates in medicine and 9 graduates in pharmacy. In addition to the annual report of the Dean, which is published elsewhere in this JOURNAL, an admirable address was delivered by Prof. G. D. Shands, of the Law Department of the University, dealing with the relation of the physician to civic pride, patriotism and his influence in correcting race suicide.

ANNUAL MEETING OF THE CHARITY HOSPITAL OF LOUISIANA ALUMNI ASSOCIATION. The Charity Hospital of Louisiana Alumni Association held its annual meeting May 13 at the rooms of the Orleans Parish Medical Society. Considerable interest was elicited in the report of the President which, with the general discussion, argued for a better recognition of the visiting staff by the hospital board.

The election of officers resulted as follows: President, Dr. W. M. Perkins; Vice President, Dr. W. E. Kittredge; Secretary, Dr. S. K. Simon; Treasurer, Dr. E. L. Leckert; Historian, Dr. N. F. Thiberge; Executive Board, Drs. E. H. Walet, M. H. McGuire and S. M. D. Clark.

A most enjoyable banquet was served after the meeting at the Grunewald Hotel with the following set speeches: *Annual Oration*, Hon. R. F. Broussard; *Charity Hospital*, Edwin Marks, Esq.; *Hotel Dieu*, Dr. P. B. Salatich; *New Orleans Sanitarium*, Dr. E. D. Martin; *Touro Infirmary*, Dr. A. Nelken; *Tulane University*, Dr. Isadore Dyer; *Hospital Progress*, Dr. J. M. Batchelor; *Eye, Ear, Nose and Throat Hospital*, Dr. L. G. LeBeuf. There were other impromptu toasts and the body adjourned at an early morning hour.

INDEX MEDICUS. The *Index Medicus* announces its continuance for the coming year under the editorship of Drs. Robert Fletcher and Fielding H. Garrison. The subscription price to the *Index Medicus* is \$5.00 a year, which in nowise represents the cost of production, which is guaranteed by the Carnegie Institution of Washington.

A recent circular conveying this announcement also urges a wider support of this valuable institution by physicians, health officers, librarians, and others generally, in order that the *Index* may be continued. The circular states that "Unless it appears that the INDEX MEDICUS is of greater service to the medical profession and can help to support itself to a greater extent than in the past, it may become advisable to discontinue its publication."

THIRTY-SECOND ANNUAL MEETING OF THE AMERICAN ACADEMY OF MEDICINE. This meeting will take place at the Hotel Dennis at Atlantic City, on Saturday, June 1, and Monday, June 3, 1907. The provisional program indicates a most interesting meeting.

THE ALBERT BALDWIN SANITORIUM at El Paso, Texas, was opened on May 1 for the reception and treatment of suitable cases of tuberculosis.

AT A MEETING OF the Harrison County (Miss.) Medical Society, May 14, the secretary was instructed by the Society to write the NEW ORLEANS MEDICAL & SURGICAL JOURNAL, *The Mississippi Medical Monthly* and *The Journal of the American Medical As-*

sociation, and to protest against the action of Dr. F. J. Rhomer, who is employed by several of the old line insurance companies. It seems that Dr. Rhomer, in trying to induce members to break their agreement concerning the \$5.00 examination fee, states that several of your members have already broken their pledge and are now examining for a less fee. "We denounce Dr. Rhomer's statements as 'deliberate and most unqualified falsehoods' worthy of stronger terms. We trust that his statements concerning certain physicians of Adams county are also untrue. We regret that the insurance companies should employ such a man to be their representative."

THE AMERICAN MEDICAL EDITORS' ASSOCIATION. The thirty-eighth annual meeting of this association will be held at the Marlborough-Blenheim Hotel, Atlantic City, N. J., under the presidency of Dr. James Evelyn Pilcher.

THE LANCET, OF LONDON. We regret to learn of the recent death of the senior editor of the *Lancet*, Mr. Thomas Henry Wakley, a son of the Thomas Wakley who founded the *Lancet*. Although the deceased had reached the advanced age of eighty-six, we understand that almost up to the last he was active in the management of the journal. His son succeeds to the editorship.

PERSONALS: Dr. T. S. Dabney, of New Orleans, has been honored in the appointment of his son, Mr. T. E. Dabney, to the position of Third Secretary to the Embassy of the United States Government in the City of Mexico. The JOURNAL congratulates both father and son.

Dr. L. W. Bremerman desires us to announce that he has removed from New York to Chicago.

Dr. William S. Thayer, of the Johns Hopkins Hospital, of Baltimore, was the honored guest of the Louisiana State Medical Society during its recent meeting, and was made an honorary member of this body. In honoring Dr. Thayer the Society undoubtedly distinguishes itself.

Dr. S. F. Mioton is at present in Philadelphia doing post-graduate work on the eye.

Professor Wm. A. Evans, of the University of Illinois, attended the meeting of the Louisiana State Medical Society as a distinguished guest, and was made an honorary member.

Drs. W. E. Parker and E. L. Martin, of Hot Springs, Ark., were in New Orleans to attend the meeting of the State Medical Society.

Dr. R. S. Curry, the President, and Dr. E. F. Howard, the Secretary of the Mississippi State Medical Society, attended the meeting of the State Society.

Dr. A. B. Nelson was elected coroner by the Police Jury of Bienville Parish, on April 24, to succeed Dr. J. H. Givens, deceased.

Dr. C. H. Cammack and Dr. C. C. Jauquet have been appointed to the positions of resident surgeons at the Eye, Ear, Nose and Throat Hospital.

MARRIED: Dr. L. L. Cazenavette, on April 29, 1907, to Miss Mignonne De Gruy.

Dr. Louis M. Thomason and Miss Clara Hamoner, on April 30, 1907.

Dr. H. L. Pirckle and Mrs. E. A. Greening, on April 30, 1907.

DIED: Dr. Thomas H. Wymer, of Marshall, Minn., died last month. Dr. Wymer spent one winter here attending the New Orleans Polyclinic.

On April 19, 1907, Dr. C. C. Thompson died at the age of eighty years, after having been a practitioner of medicine for over fifty years.

At Montgomery, Ala., on April 19, Dr. R. F. Mitchel, physician, scientist and author, died after celebrating, a few weeks before, his eightieth birthday. The doctor was much interested in the stage, and was a great friend of Edwin Booth's.

THE AVOYELLES PARISH MEDICAL SOCIETY met in regular quarterly session at Bunkie on April 4, 1907. The meeting was called to order in the Mohawk Club rooms by Dr. E. Regard, President. Nineteen members were present. Dr. R. G. Ducote read a carefully prepared paper on "Prevention of Tuberculosis". His paper was well received and was discussed by several members. Dr. Regard related the history and clinical course of a patient upon whom he recently performed the operation of nephropexy. Dr. G. R. Fox spoke of a case of hystero-epilepsy now under treatment.

The question of public lectures before the High Schools of the parish was deferred for final action until the next meeting. The A. M. A. resolutions demanding a minimum fee of \$5.00 of all life insurance companies where urinalysis is required was passed and signed by all present. Since this meeting all absentees, non-members residing within the parish, and those on the border of Avoyelles who practice in the parish have signified their willingness by letter to the secretary to abide by the resolutions. On the invitation of the President, Mansura was selected as the next meeting place, Thursday, July 4. This will be Ladies' Day. All members will be accompanied by their wives or sweethearts. A resolution appropriating about \$100.00 from the treasury was passed and donated to the Mansura physicians to aid in defraying the expenses. The social features of the day were left to the local physicians.

Treatment of Tuberculosis in General was adopted as the subject for discussion.

Dr. W. F. Couvillion was appointed essayist, and Dr. T. A. Ray will open the discussion.

Publications Received.

W. T. Keener & Co., Chicago, 1907.

Metabolism, Vol. I, *Physiology*; Vol. II, *Pathology*. By Carl Von Noorden. Vols I and II. Anglo-American issue under the editorship of Prof. I. Walker Hall.

D. Appleton & Co., New York and London, 1907.

Physical Diagnosis. By Howard S. Anders, A. M., M. D.

Lea Bros. & Co., Philadelphia and New York, 1907.

Modern Medicine. By Wm. Osler, M. D., assisted by Thomas McCrae, M. D., Vol. I.

P. Blakiston's Son & Co., Philadelphia, 1907.

Practical Physiology. By Philip B. Hawk, M. S., Ph. D.

Anesthetics, Their Uses and Administration. By Dudley Wilmot Buxton, M. D. 4th Edition.

The Treatment of Disease. A Manual of Practical Medicine. By Reynold Webb Wilcox, M. A., M. D., LL. D.

Miscellaneous.

Scarlet Fever: Its Prevention, Restriction and Suppression. Published by the Illinois State Board of Health, 1907.

Diphtheria, Its Prevention, Restriction and Suppression. Issued by the Illinois State Board of Health, 1907.

Bulletin of the Tulane University of Louisiana. Series 8, March, 1907. No. 3.

The Register Bulletin of The Tulane University of Louisiana. Series 8, April, 1907. No. 4.

The Propaganda for Reform in Proprietary Medicines.

Reports of the Census Office: Mortality Statistics, 1905. Department of Commerce and Labor. (Government Printing Office, Washington, 1907.)

United States Department of Agriculture. The Timber Supply of the United States. By R. S. Kellogg.

The German Pseudo Doctors. By Dr. G. L. Hagen Burger. (Translated.)

Medical Department of Fort Worth University Bulletin. Vol. I. April 15, 1907. No. 3.

A Practitioner's Handbook of Materia Medica and Therapeutics. By Thos. S. Blair. (Medical Council, Philadelphia.)

Fifty-eighth Annual Report of the Board of Trustees and Superintendent of the Central Indiana Hospital for the Insane for the Fiscal Year Ending October 31, 1906.

Ninth Biennial Report of the Trustees of the North Dakota Hospital for the Insane for the Fiscal Year Ending June 30, 1906.

Hygienic Laboratory. Bulletin No. 33. Studies in Experimental Alcoholism. By Reid Hunt. (Government Printing Office, Washington, D. C., 1907.)

Transactions of the 37th Annual Session of the Medical Society of Virginia, held in Charlottesville, Va., October, 1906.

Reprints.

Abnormality in Amniotic Secretion in Its Relation to Fetal Malformation. By Joseph Brown Cooke.

Intracranial Cephalhematoma; (2) Obstetrics; (3) Therapeutics. By Dr. E. S. M'Kee.

New and Non-Official Remedies.

MORTUARY REPORT OF NEW ORLEANS.

(Computed from the Monthly Report of the Board of Health of the City of New Orleans.)

FOR APRIL, 1907.

CAUSE.	White.	Colored.	Total.
Typhoid Fever.....	3	5	8
Intermittent Fever (Malarial Cachexia)	1	1	1
Smallpox.....	1	1	2
Measles	14	8	22
Scarlet Fever.....	3	.....	3
Whooping Cough.....	4	.....	4
Diphtheria and Croup.....	2	5	7
Influenza	1	.....	1
Cholera Nostras.....	1	.....	1
Pyemia and Septicemia	1	.....	1
Tuberculosis.....	51	42	93
Cancer.....	21	4	25
Rheumatism and Gout	2	1	3
Diabetes	1	1	2
Alcoholism	7	1	8
Encephalitis and Meningitis.....	12	2	14
Locomotor Ataxia.....	.....	.....	.....
Congestion, Hemorrhage and Softening of Brain.....	13	5	18
Paralysis	1	3	4
Convulsions of Infants	4	6	10
Other Diseases of Infancy	29	17	46
Tetanus.....	2	1	3
Other Nervous Diseases .....	.....	1	1
Heart Diseases.....	45	42	87
Bronchitis	8	3	11
Pneumonia and Broncho-Pneumonia.....	38	41	79
Other Respiratory Diseases.....	2	3	5
Ulcer of Stomach.....	2	1	3
Other Diseases of the Stomach	6	1	7
Diarrhea, Dysentery and Enteritis.....	97	36	133
Hernia, Intestinal Obstruction.....	2	1	3
Cirrhosis of Liver.....	11	1	12
Other Diseases of the Liver	4	1	5
Simple Peritonitis	1	1	2
Appendicitis.....	2	2	4
Bright's Disease	23	15	38
Other Genito-Urinary Diseases.....	6	2	8
Puerperal Diseases	2	3	5
Senile Debility.....	16	6	22
Suicide	5	.....	5
Injuries.....	22	11	33
All Other Causes.....	26	10	36
TOTAL.....	490	284	774

Still-born Children—White, 17; colored, 27; total, 44.

Population of City (estimated)—White, 251,000; colored, 90,000; total, 341,000.

Death Rate per 1000 per annum for Month—White, 23.42; colored, 37.87; total, 27.23.

METEOROLOGIC SUMMARY. (U. S. Weather Bureau.)

Mean atmospheric pressure.....29.98

Mean temperature.....67.

Total precipitation 13.18 inches. |

Prevailing direction of wind, south.

St.

106496

